Arranging and Orchestration methods:
a model text for post secondary courses

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Volume 1

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DECLARATION

I certify that except where due acknowledgment has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the exegesis is the result of the work which has been carried out since the official commencement date of the approved research program; and, any editorial work, paid or unpaid, carried out by a third party is acknowledged.

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CHAPTER 1

INTRODUCTION

This chapter focuses on the background, aims and scope of the study, the definition of the problems and the research question with its sub-questions. In defining the problem, extensive research was done into where tertiary music courses were offered throughout Australia and New Zealand that included Arranging and/or Orchestration as part of the program. Chapter 2 focuses on the research methodology including a survey that was undertaken amongst lecturers working in tertiary music courses. Chapter 3 presents the data and analysis of results of this survey. In reporting on research, a chapter of literature review would normally be included early in the presentation. Due to the nature of this project, the selected literature has been included in chapter 4 where it has been related directly to the sections of the project in conjunction with the data. The aim of using the literature and data together is to directly justify and support the inclusion of material in the project. Chapter 5 will draw the conclusions from the research, provide responses to the research question and sub-questions, and make recommendations for future research.

Description of research - location

Through investigation of the content of post-secondary school music courses in Arranging and Orchestration currently available in Australia and New Zealand, the researcher has produced a comprehensive model arranging/orchestration method book suitable as a course text. The project is in the form of a textbook incorporating musical examples and audio recordings. Whilst the project is based in Australia and intended for an Australian market, comparative research into similar issues in North America was undertaken.

Aims

The aim of the study was to firstly identify the existing courses, the manner in which subject material is delivered, and the teaching process of Arranging and/or

Orchestrating music. This investigation considered the range of educational and musical texts and resources currently used in the courses. Further research then revealed if a course method book existed that met the needs of educators delivering such courses. The next aim was to obtain knowledge of the requirements of educators in terms of content and, finally, to produce a model course method book.

The scope of the study

Kennedy (1996) in *The Oxford Dictionary of Music* defines Orchestration as "The art of scoring music for orchestra or band" and "Arrangement of a work for orchestra which was composed for another medium" (p. 533). He also defines Arranging as the "adaption of a piece of music for a medium other than that for which it was originally composed. (In the USA there appears to be a tendency to use 'arrangement' for a free treatment of the material and 'transcription' for a more faithful treatment. In jazz, 'arrangement' tends to signify 'orchestration')" (p. 28). *The American Heritage Dictionary of the English Language* (2000) defines Orchestration as "Arrangement of music for performance by an orchestra" (n.p.) and Arranging as "To reset (a composition) for other instruments or voices or as another style of performance" (n.p.). Wordnet (2003) defines Orchestration as "the act of arranging a piece of music for an orchestra and assigning parts to the different musical instruments" (n.p.) and Arranging as "a piece of music that has been adapted for performance by a particular set of voices or instruments" (n.p.).

These definitions seem overtly ambiguous and contradictory as most sources freely interchange the terms Arranging and Orchestration within their definitions. The identified literature states that Orchestration is an Arrangement and that Arranging is merely a form of adaptation. Kennedy (1996) then appears to confuse matters by saying that Arranging is in fact Orchestration in a jazz context.

Munro (1987) in *The Chambers Pocket Guide* offers a clearer definition of Orchestration as "The art of writing for an orchestra, band, etc., involving great knowledge of tone-colors, range of instruments, technical capacities and combinations of instruments, etc." (p. 71) and Arranging as "A harmonized setting for voices or instruments of an existing melody" (p. 8). Keefe and Ingles (1990) in *Harrap's Illustrated Dictionary of Music and Musicians* offer a more concise definition of

Orchestration as "Art of blending and contrasting the tonal qualities of the various orchestral instruments" (p. 366) and Arranging as "The addition of harmonized accompaniment to an existing melody" (p. 22).

Cacavas (1975) argues that the use of Composition defines the difference between Arranging and Orchestration. He states that "Orchestration is actually transcribing music from one form into another. Arranging is starting from scratch. If you take the melody line of 'Yankee Doodle' and make a setting for symphony orchestra, you have arranged it. If you take a Beethoven string quartet and rescore it for two flutes, a clarinet and a bassoon, then you have made an orchestration. Therefore, if you are an arranger then by necessity you must be or become a composer. On the other hand, if you only orchestrate, then all you really need to know is transposition and ranges. Naturally there are many shades of gray in between, but the differences are clear cut" (p. 3).

Even amongst educational institutions there appear to be contradictions in the use of the terms in the subject titles. Course units entitled Orchestration and Arrangement may have elements of both Orchestration and Arrangement (using Munro's 1987 definition) or may have just one. Other subject titles may be more generic as Applied Music, Instrumentation, Performance and Music Skills or Creating Music. Sometimes Orchestration and Arranging are taught within the course structure of Composition and not as a separate subject.

The research project focused on Arranging pedagogy with reference to Orchestration as it relates to Arranging (using Munro's 1987 definition). A method book focusing on pure Orchestration would need to be a separate project as a volume on the subject would be considerable in size. Existing texts on the subject of Orchestration such as Rimsky-Korsakov (1964) and Piston (1955) are over 300 and 400 pages respectively. A method book on Arranging still requires some discussion of Orchestration as it is an integral part of the Arranging process. The study investigated the needs of undergraduate music courses and the possible application of the project to postgraduate study.

A limitation was set to the project to design the model text for a two-semester course. While some courses run only one semester and others for four semesters or more, it was beyond the scope of this project to develop a text capable of meeting the requirements of courses of varying duration.

Definition of the problem

Through the researcher's experience and informal discussions with other pedagogues working in tertiary music environments, the researcher is of the opinion that there is currently not a comprehensive arranging/orchestration method book that could be used exclusively as a course text in post-secondary arranging courses. While there are numerous published method books available, they are generally produced in North America and do not address all the needs of an arranging/orchestration course. Based on research, most teachers and lecturers in post-secondary school music courses teaching arranging/orchestration use extracts from several books and link them together, filling in the gaps with their own methodologies and experiences. The problem with this approach is the resultant lack of uniformity through the various sections of the course, in particular the musical examples used and the availability of audio recordings of the examples. It was also found that audio recordings of musical examples are considered an essential part of an arranging/orchestration text to demonstrate and validate methods and techniques employed. Some older texts including Cacavas (1975), Delamont (1965), Garcia (1954), Grove (1972), Kennan (1970), Levine (1995), Palmer (1964), Piston (1955), Riddle (1985) and Rimsky-Korsakov (1964), while valuable in their content, do not supply audio recordings. Most texts investigated that do supply audio recordings such as Mancini (1973), Nestico (1993b) and Wright (1982) only demonstrate good arranging/orchestration techniques and fail to compare the same example conceived through poor technique. Sebesky (1975) includes a few examples of comparative techniques in the text but fails to include these in the accompanying audio recordings.

Investigations revealed that many universities in North America produce their own coursework books, tailor-made to meet the requirements and duration of the course. For example the method books used at the University of North Texas for third year undergraduate arranging classes (Rutherford, 2000a, 2000b) contain original work by

the author, analysis of works by other arrangers and includes audio recordings of these extracts.

The following tables are the result of investigations into where courses are offered throughout Australia and New Zealand that include Arranging and/or Orchestration. The results were obtained by searching for music courses offered in the *International directory of music and music education institutions* (Bartle, 2000) and also visiting the tertiary entrance authority website for each state. For example, QTAC - Queensland Tertiary Admissions Centre (2005); SATAC -South Australian Tertiary Admissions Centre (2005), TISC Tertiary Institutions Service Centre (2005), Universities Admissions Centre (NSW & ACT) Pty Ltd (2005), Victorian Tertiary Admissions Centre (2005) and searching for music courses that may have been introduced since 2000. Following this, the websites of each institution listed were visited and a search was undertaken for courses and subjects offered and any available course documentation. The problems concerned with the lack of on-line documentation will be addressed later in this study but it will be assumed that if no texts were listed then there is no requirement to purchase texts but there may be reference texts listed in course documents delivered to students on enrolment.

In Victoria (see Table 1) there appeared to be no required texts mentioned amongst the 15 institutions and only Monash University listed books by Adler (2002) and Kennan and Grantham (1990) as references (i.e., for further reading and not required for purchase). In Tasmania (see Table 1), the University of Tasmania (Hobart) requires the texts by Adler (2002) and Blatter (1980) and then lists the book by Read (1953) as a reference. Read is an encyclopaedic volume listing specific orchestral devices. Whilst being a valuable reference book, it includes very little Orchestration content. No other University in Australia was found to require two text books. This was found to be the most number of required texts in any course in Australia.

Table 1: Vic. & Tas. Post Secondary Music Courses involving Arranging and/or Orchestration

Institute	Course	Major	Arranging	Text	Orchestration	Text
Aus. Catholic Uni.	BMus.	Comp.			Composition	
Aus. Guild Mus. Ed.	Cert IV/Dip/AdDip/BMus	Music	Writing and Arr.	unknown	Orchestration	unknown
AFTRS	Grad. Dip.	Screen Comp.			Comp. & Orch.	unknown
Box Hill Institute	Adv. Dip.	Music	Arr. music for brief	none		
Box Hill Institute	B.App.Mus.	Music	Composition Studies	none	Film Scoring	none
Defence Force School Music	Band Officers Course	Music	Arrange a Band	none	Arrange a Band	none
Gordon Inst. TAFE	Cert. IV/Dip./Adv. Dip.	Music/Comp.	Arr. Music for Brief	unknown	Composition	unknown
Goulburn Ovens TAFE (Wangaratta)	Cert. IV/Dip.	Music/Comp.	Arr. Music for Brief	unknown	Composition	unknown
JMC Academy	Cert. IV/Adv. Dip.	Music	Writing and Arr.	unknown		
Melba Con.	Dip./BMus.	Music	unknown	unknown	Composition?	unknown
Melbourne Uni.	B.Mus.	Music/Comp	Orch. & Arrangmt.	none	Orch. & Arr.	none
Monash Uni.	B.Mus.	Music/Comp.			Applied Music	(ref)Adler, Kennan
Monash Uni.	B Perf A	Music	possibly in 2006			
NMIT	Cert. IV/Dip./Adv. Dip.	Music/Comp.	Arr. Music for Brief	unknown	Composition	unknown
School Audio Engineering	CertIV. Audio Eng.	Audio Eng.			Instrumentation	unknown
University of Ballarat	Adv. Dip.	Music	Arr. Music for Brief	unknown		
Uni. Tas. (Hobart)	BMus/BT or Dip. or BA	Music/Comp.			Orchestration	Adler(req), Blatter(req), Read & Gardner(req)
Uni. Tas. (Launceston)	B.Cont.Mus.	Music	Theory,Comp.&Arr.	None		
Vic. College Arts (VCA)	B.Mus.	Music/Comp.	Arranging	None	Orchestration	none
Victoria Uni. (Sunbury)	Cert IV/Dip/AdDip/BMus	Music/Comp.	Arr. Music for Brief	unknown	Composition	unknown

Notes: The Defence Force School Of Music offers purpose built courses for the Military Forces. The Band Officers course is accredited as Advance Diploma level. Melba Conservatorium is affiliated with Victoria Uni. The Victorian College of the Arts is affiliated with Melbourne Uni. AFTRS offers courses in partnership with the VCA.

Sources: ACU National Bachelor of Music (2005), Australian Guild of Music & Speech Education System Syllabus (2005), AFTRS Graduate Diploma: Film and Television - Screen Composition, Flexible Delivery (2005), Box Hill Institute - Courses - Bachelor of Applied Music (Composition) (2005), Box Hill Institute - Courses - Advanced Diploma of Music (2005), Defence Force School of Music Group Leader Course (2005), Gordon Institute of TAFE - Courses - Advanced Diploma of Music (2005), GippsTAFE Advanced Diploma of Music (2005), Goulburn Ovens Institute of TAFE (2005), JMC Academy Courses - Popular Music Performance (2005), Melba Conservatorium of Music - Handbook (2005), University of Melbourne: Faculty of Music: 740-342 Orchestration and Arrangement 1 (1995), Monash University School of Music MUSMUM4010 (2005), NMIT - Advanced Diploma of Music Performance (Jazz and Contemporary) (2005), SAE Melbourne - Audio Engineering Program (2005), University Of Ballarat 2003/4 Degree & TAFE Course Guide: Music Performance (2005), University of Tasmania Unit Detail (2005), Victorian College of the Arts School of Music 2005 Handbook (2005), Victoria University Course Guide (2005).

In South Australia, Western Australia and the Northern Territory (see Table 2), there appeared to be no required texts amongst the eight institutions and no listed references.

Table 2: S.A., N.T. & W.A. Post Secondary Music Courses involving Arranging and/or Orchestration

Institute	Course	Major	Arranging	Text	Orchestration	Text
Central TAFE (WA)	Cert IV	Music	Arr. Music for Brief	Unknown		
Charles Darwin Uni (NT)	B.Mus.	Music			Unknown	
Edith Cowan Uni. (WA)	B.Mus.	Jazz	Comp. & Arr.	Unknown		
Edith Cowan Uni. (WA)	B.A.	Comp.			Stylistic Comp.	Unknown
Great Southern TAFE (WA)	Cert. IV	Music	Possibly (unclear)			
TAFE Noarlunga (SA)	Diploma	Music	Arr. Music for Brief	Unknown		
TAFE Salisbury (SA)	Diploma	Music	Arr. Music for Brief	Unknown		
Uni. Adelaide (SA)	B.Mus.	Music	Jazz Arranging	None	Orchestration	None
Uni. W.A.	B.Mus.	Comp.			Orchestration	None
Notes: The Elder Conservatorium is now part of Adelaide Uni. WAPA is part of Edith Cowan Uni.						

Sources: Central TAFE WA C375 Certificate IV in Music (2005), Charles Darwin University (2005), Western Australian Academy of Performing Arts: Bachelor of Music (Jazz) (2005), Great Southern TAFE WA: C375-Certificate IV in Music (2005), TAFE SA Course Module/Units: Diploma of Music (2005), University of Adelaide: GENMUS 2006 - Orchestration II (2005), University of Adelaide: JAZZ 2007A -Jazz Arranging Class II Part 1 (2005), UWA Handbooks 2005 - Orchestration 322 (2005).

Amongst the fifteen institutions in New South Wales and the ACT (see Table 3), the University of New England was the only one prescribing an Orchestration Text (Blatter, 1980) for its Advanced Composition course. The Australian National University prescribed Schietroma (1996) for its specialist class in Percussion Arranging and Composition. This book, published by RonJon publications, a small self-publishing organisation in Texas, is not held in any library in Australia including the ANU library. Further investigation revealed that the lecturer of this class in fact was a student of Schietroma at the University of North Texas and therefore had first-hand knowledge of Schietroma's publications and expertise in this field. This explains this text being prescribed.

Table 3: N.S.W. & A.C.T.   Post Secondary Music Courses involving Arranging and/or Orchestration

Institute	Course Name	Major	Arranging	Text	Orchestration	Text
Aus. Int. Cons. Mus.(AICM)	B.Mus.	Comp.			Orchestration	unknown
Aus. Nat. Uni. (ANU)	B.Mus.	Jazz/Comp.	Jazz Arranging	none	Perc. Arr. & Comp.	Schietroma
Aus. Inst. Of Music (AIM)	B.Mus.	Perf./Comp.	Orch. & Arr.	unknown	Orch. & Arr.	unknown
AFTRS	Grad. Dip.	Screen Comp.			Comp. & Orch.	unknown
Avondale College	B.A./ B.Ed.	Music	Perf. & Music Skills	unknown	Musicology&Harmony/Comp.	unknown
JMC Academy	CertIV/AdDip	Music	Writing and Arr.	unknown		
Macquarie University	BA	Music	Possibly (unclear)			
Newcastle Uni.	B.Mus.	Music			Composition?	
School Audio Engineering(SAE	CertIV AudioEng.	Audio Eng.			Instrumentation	unknown
Southern Cross Uni.	Bach.Arts	Music	Contmp. Mus. Theory	unknown		
Sydney Con.	B.Mus.	Jazz	Jazz Arr. & Harmony	None		
Sydney Con.	B.Mus.	Comp.			Comp.Tech. & Analys.	None
University of New England	B.Mus./B.Teach.	Music			Adv. Comp.	Blatter
Uni. Wollongong	MCA	Comp.			Composition?	
Uni. N.S.W.	B.Mus.	Music	Orch. & Arrangement	None	Orch. & Arrangement	None
Uni. West Sydney	B.Mus.	Music/Comp.	Arr. Popular Music	None	Composition	None
Wesley Inst. (WIMA)	BCA	Music	Comp. & Arr.	unknown		

Note: The Sydney Conservatorium is now part of the Uni. Sydney

Sources: Australian International Conservatorium of Music: Tertiary Programs (2005), ANU - Studyat- Arts - Undergraduate - Courses - MUSM1235 (2005), Australian Institute of Music (2005), AFTRS Graduate Diploma: Film and Television - Screen Composition, Flexible Delivery (2005), Avondale College (2005), JMC Academy Courses - Popular Music Performance (2005), Macquarie University 2005 Handbook: MUS01 - Contemporary Music (2005), University of Newcastle: Programs and Courses 2006: Bachelor of Music (2005), SAE Sydney Electronic Music Producer (2005), Southern Cross University - Courses and Units (2005), University of Sydney: Unit of Study Handbook: Composition (2005), University of Sydney: Unit of Study Handbook: Jazz Arranging (2005), University of New England: Music Units (2005), Bachelor of Creative Arts (Sound - Composition and Production) - 2005 Course Handbook @ UOW (2005), UNSW Handbook Course - Orchestration and Arrangement - MUSC3302 (2005), University of Western Sydney: Units (2005), Wesley Institute (2005).

In Queensland (see Table 4), the University of Southern Queensland (USQ) prescribed an Orchestration text (Adler, 2002) for its Music Craft 6 subject and Griffith University listed a text (R. Wright, 1982) for Arranging. USQ also lists White (1992) as a reference in the Arranging for School Ensemble class. The Queensland University of Technology lists four references: Blatter (1980), Erickson (1982), Nestico (1993b), and White (1992), the first being an Orchestration book for its subject Arranging 1.

Table 4: Queensland   Post Secondary Music Courses involving Arranging and/or Orchestration

Institute	Course Name	Major	Arranging	Text	Orchestration	Text
Aus. Catholic Uni.(ACU)	B.Mus.	Music			Composition?	
AFTRS	Grad. Dip.	Screen Comp.			Comp. & Orch.	unknown
Central Qld. Uni. (CQU)	B. Jazz Studies	Music	Comp:Songwrit.&Arr.	None		
Gold Coast Inst.TAFE	Dip. Mus.	Music	Arr. Music for Brief	unknown		
Griffith Uni. Gold Coast	B.Pop.Mus.	Music	Comp:Songwrit.&Arr.	None		
Griffith Uni. Southbank	B.Mus.	Music	Jazz Arranging	None		
James Cook Uni.(JCU)	B.Mus. or BA	Music	Creating Music 2A	None	Creating Music	None
Qld. Uni. Tech. (QUT)	B.Mus.	Music	Arranging 1	refs: Blatter, Erikson, Nestico, White	Arranging 1	None
SouthBank Inst. TAFE	Dip.Mus./Cert.IV	Music	Arr. Music for Brief	unknown		
Trop. Nth. Qld Inst.TAFE	Ad.Dip./Dip.	Music	Arr. Music for Brief	unknown		
Uni. Qld. (UQ)	B.Mus.	Music/Comp.	Arr. for School Ens.	unknown	Composition3?	
Uni. Sth. Qld. (USQ)	B.Mus.	Music	Arr. for School Ens.	White (ref.)	Music Craft 6	Adler(req.)

note: The Queensland Conservatorium of Music is part of Griffith Uni.

Sources: ACU National Bachelor of Music (2005), AFTRS Graduate Diploma: Film and Television - Screen Composition, Flexible Delivery (2005), Central Queensland University Student Handbook (2005), Gold Coast Institute of TAFE: Arrange Music for a Brief (2005), Griffith University (Gold Coast): Composing, Songwriting and Arranging (2005), Griffith University: Course Catalogue Search: Jazz Arranging (2005), JCU - Studyfinder: MU3422 (2005), QUT: Unit Details for KMB212 Arranging (2005), Southbank Institute: Diploma of Music (Performance) (2005), Courses at Tropical North Queensland TAFE Cairns Queensland Australia Study Courses Training: Diploma of Music (2005), MUSC3221 - Composition 3 - The University of Queensland, Australia (2005), University of Southern Queensland Course Specification Music Craft 6 (2005).

In New Zealand (see table 5), a similar situation was found in that only two of nine institutions, the University of Waikato (Adler, 2002) and the University of Canterbury (K.W. Kennan & Grantham, 1990), listed prescribed texts for their Orchestration subjects.

Table 5: New Zealand   Post Secondary Music Courses involving Arranging and/or Orchestration

Institute	Course	Major	Arranging	Text	Orchestration	text
NZSM	Grad.Dip.	Composition			Orchestration	
Southern Inst. Tech.	B.Con.Mus	Music	Cont. Theory			
University of Auckland	B.Mus.	Music			Orchestration	unknown
University of Massey (Auckland)	B.Mus.	Jazz	Arranging	none		
University of Massey (Wellington)	B.Mus.	Jazz	Arranging	none		
University of Massey (Wellington)	B.Mus.	Composition	Conducting & Arr.	none	Orchestration	none
University of Otago	B.Mus.	Composition			Comp.2	Unknown
University Of Waikato	B.Mus.	Music/Comp.			Orchestration	Adler
Universityof Canterbury	B.Mus.	Composition			Orchestration	Kennan&Grantham
Universityof Canterbury	B.Mus.	Jazz	Jazz Arr. & Comp.	None		
Victoria University	B.Mus.	Composition			Instrumentation	none

Sources: New Zealand School Of Music Academic Programs (2005), Southern Institute of Technology School of Music (2005), Subjects - Faculty of Arts at the University of Auckland, New Zealand (2005), Massey University - Bachelor of Music (Jazz Performance) - Introductory Information (2005), Department of Music, University of Otago (2005), University of Waikato: 2005 Catalogue of Papers: Orchestration (2005), Course Information System - University of Canterbury: MUSI 382 (2005), Course Information System - University of Canterbury: MUSI 224 (2005), School of Music : Victoria University of Wellington, Courses (2005).

The research questions

The main research question that has guided this study is: What are the constituent parts and theoretical underpinnings of a model Arranging course text book?

The secondary questions include:

What materials are currently being used by lecturers and teachers throughout universities, colleges and other institutions in Australia and New Zealand for the delivery of arranging (and/or orchestration) courses, and do these materials differ from those used in North America?

What assumptions are made in the background knowledge of the students entering these courses from upper-secondary level or otherwise and can this project assist students making the transition?

Is there potential to have a standard text published in Australia, what are the important elements that should be included, and is it possible to deliver such a text as an online document?

Rationale for project

Background

Many courses in music at the tertiary level include a program of study in arranging and/or orchestration. Through the research, it appears that there is no published method book that meets the exact requirements of such a course. If it can be established that there is a need for one text, the text then needs a particular framework and approach which requires investigation.

Within the proposed text there will be nothing complex or new. It is the organization of the material as well as the many musical examples and recordings which should make this project beneficial to educators and students.

Current body of knowledge

Investigations and searches into the published literature on the topic of Arranging or Orchestration Pedagogy have revealed very little material. A search on RILM Abstracts of Music Literature database revealed only two entries: Redmann (2003) discusses ideas in teaching orchestration in an article in German. Schoenmakers (2000) discusses the definitions of the terms Instrumentation and Orchestration and attempts to classify the various theories of instrumentation and orchestration into five categories in an article in Dutch.

Some more useful information was found on the National Library of Australia Catalogue that returned an article on microfiche titled "The development and evaluation of programmed instruction in the techniques of jazz ensemble arranging" by Husak (1978). This PhD dissertation "determines the feasibility of teaching the techniques of jazz ensemble arranging by means of programmed instruction. Identifies the pertinent concepts, principles, and techniques employed by the jazz ensemble arranger, and develops a programmed textbook with accompanying tape-recorded musical examples. An evaluation of the program as an instructional method with college freshmen music students is included" (Husak, 1978). Husak's dissertation's abstract appears to have many similar objectives to the researcher's, however, the publication date implies that many concepts are outdated (largely due to the proliferation of computer based scoring methods).

A Google search (Google, 2007) of the World Wide Web did not return any published books on the topic of Arranging or Orchestration Pedagogy that related directly to the structure of tertiary music courses.

Potential

The researcher believes there is a great potential to produce a comprehensive and concise method that would benefit the community in the area of post-secondary music education. It is apparent that many courses throughout Australia and New Zealand do

not use a specific text. It is important to investigate the reasons and develop a suitable model.

Discussions with Stephen Newcomb, Associate Professor Jazz Studies and lecturer in Arranging, Griffith University, Queensland (personal communication, 22 August, 2005) confirmed that he believes such a project could be beneficial to lecturers such as himself. Similar discussions with Brett Rosenberg, lecturer in Film Scoring at Box Hill Institute of TAFE (personal communication, 22 September, 2005) and Graeme Lyall (personal communication, 29 September, 2005), who was formerly head of Composition and Arranging at Edith Cowan University, WA (personal communication, 22 September, 2005), also stated that the idea the research will investigate is unique within Australia and of great potential to assist in the delivery of Arranging courses.

SUMMARY

This chapter identied the aims of the research, the scope of the study, the definition of the problems and the research question with its sub-questions. Tertiary music courses were identified throughout Australia and New Zealand that included Arranging and/or Orchestration as part of the course. The following chapter focuses on the research methodology including a survey that was undertaken amongst lecturers identified in this chapter.

CHAPTER 2

METHODS

The Research Process

The first stage in the sequence of this project was to undertake a review of the literature to establish what research has been undertaken in this area and, more importantly, what published texts are available. The literature review for this research was completed in two parts, this exegesis being the first part, with the second part occurring later in the research process. The second stage of the research process was to identify the lecturers directly involved in the delivery of arranging and/or orchestration courses and classes or units identified in the preliminary research of chapter 1. This was achieved through emails to the lecturers named on the institution's website or course documents, emails to the institution's music department or telephone calls to the institution. Following this, the third stage was to construct an online questionnaire through www.surveymonkey.com and invite the lecturers to participate. The final stage of the research involved the second part of the literature review, involving the review of published texts in order to support and justify the inclusion of material in the project. This stage was done in conjunction with the analysis of the data collected from the survey.

Research Methodology - Quantitative or Qualitative?

In the early stages of the research, it was important to confirm the researcher's assumption that there is no single published method book that meets the exact requirements of tertiary music courses in Arranging (as perceived by the lecturers delivering such courses) and validate the proposal that a model text should be produced. The nature of this research process was focused with known variables and established guidelines. Data was collected using a standardized instrument with preset questions and responses, in the form of a survey questionnaire, through the largest representative sample of tertiary educators possible. Questions had predefined responses using a checklist and also questions using a Likert Scale (Leedy & Ormrod, 2005). While it was acknowledged that not all invited participants would respond, early estimates indicated that the sample would be between 50 and 70 people, being the largest sample available. Creswell (2005) states that the largest sample possible

will reduce sampling error and that a "high response rate creates a stronger claim in generalizing results" (p. 195). The resultant data was then put through a statistical analysis to address the research questions. The results of the analysis was then interpreted in light of the initial predictions and assumptions. In the analysis process of the early research stage, there was both deductive and inductive reasoning taking place. Leedy and Ormrod (2005) state that researchers of all persuasions use both deductive and inductive reasoning in a continual cyclic manner.

All these points indicate that quantitative research was the method being used. In this case, it could be argued that the researcher is not using quantitative research exclusively and it is in-fact a mixed-method design. The survey questionnaire revealed data from closed-ended questions and also include some open-ended questions. From the responses, inductive reasoning lead to an analysis of the data and an acknowledgment that the analysis and interpretation could have been somewhat subjective and potentially biased as the researcher had opinions of his own about the research.

In the later stages of the research, once it was established that the project was viable, the researcher used largely qualitative research in determining the content of the model text thus establishing some answers to the questions established earlier in this study. Through Content Analysis of published literature on the topic of Arranging and Orchestration, the researcher revealed the commonly used theories and methods. The researcher interviewed academics and industry professionals to gain an insight into what content was considered relevant to a model text. Here a structured interview was appropriate. Minichiello, Aroni, Timewall, and Alexander (1995) state that "researchers using structured interviewing assume that they know what sort of information they are after. Therefore, the role of the interviewer is to facilitate responses to the questions, that is, to be a neutral medium" (p. 262). A focused or semi-structured interview was more appropriate where the researcher used the broad topic of interest to guide the interview. "The content of the interview is focused on the issues that are central to the research question, but the type of questioning and discussion allow for greater flexibility" (Minichiello, Aroni, Timewall, & Alexander, 1995, p. 263).

The relevant population

As the researcher was aiming to identify the texts in use throughout Australia and New Zealand, the relevant population included those educators working in post-secondary institutions within Australia and New Zealand. Specifically, the population was narrowed to those educators involved in the delivery, supervision, facilitation or curriculum design of courses (or modules) that involve Arranging and/or Orchestration. Ideally, every educator would have been identified, located and surveyed. In practice, however, that was not possible due to such factors as educators being on leave, lack of interest in participating, or an inability to clearly identify and locate relevant individuals. As the size of the entire population in this research is relatively small, it was hoped that the target population was similar in size. Of the 114 invitations sent, 67 responded.

The approach to sampling

It was possible to survey all the target population in this survey. In this census study, conclusions were able to be drawn about the entire population. "Therefore, random sampling, hypothesis testing, and the use of inferential statistics are not necessary. For this type of survey, survey researchers simply resort to descriptive statistics about the entire population" (Creswell, 2005, p. 359). There was a reduction in sampling error as the sample was close to the entire population in size.

The respondent contact approach

Stringer (2004) says that in a personal interview situation, there must be an establishment of trust between the interviewer and interviewee. Interviewers should identify themselves, the purpose of the interview, and the issues of interest. They also should ask permission to talk about the issue and negotiate a convenient time and place to meet. Minichiello, Aroni, Timewall, and Alexander (1995) ask "What impression do you want to give the informant about the research project and their involvement in it?" (p. 77). The respondent needs to feel that they are participating in something of importance and that their responses are of value. The respondent should almost feel flattered being invited to participate in the research thus ensuring a higher response rate.

In the case of an online survey, the cover letter (the plain language statement) is where these tasks are established. Stringer (2004) discusses how the first few sentences of a cover letter are important in establishing the "importance of recipients and the value of their response" (p. 369). The purpose of the study and assurances of confidentiality should be succinctly stated to comply with the informed consent. Refer to Appendix 1 for the cover letter of invitation (the plain language statement) sent to participants. Ethics approval was granted by the RMIT Human Research Ethics Committee on November 24, 2005.

Questions in the questionnaire

A questionnaire (see Appendix 2) was developed, formatted and posted on a dedicated survey website (SurveyMonkey.com) (McKenzie, 2007d) for participants to access. Responses to this survey were collected in a spreadsheet format, with each respondant assigned a unique serial number by the survey provider, thus ensuring the anonymity of each respondent.

Section I entitled "demographics" asks for information about the participant's area of expertise, level taught, years of experience, and the type of institution.

Section II entitled "professional practice" investigates the details of the courses and their text requirements. Questions 5 to 9 look at where the decisions are made regarding the setting of curriculum, required texts, and student access to texts. Questions 10 to 14 look at what types of texts or course notes are used and their authors. This is a key section of the research and the questions following will investigate the merits of the texts or course notes used. Question 15 investigates the assumptions that are made on the students' prior knowledge (a research sub-question) and question 16 specifically investigates the important theoretical constituents of an Arranging textbook (which is in fact, the research question). There was an option of adding additional criteria that the respondent feels should be included as it was acknowledged that the researcher may have a biased set of answers presented based on personal opinion. Creswell (2005) describes this type of question as semi-closed-ended questioning and having all the advantages of open and closed-ended questioning. Questions 17 to 23 seek the participant's opinion on several statements

regarding the research sub-questions using a one to four scale attitudinal type question. A one to five attitudinal scale that includes a neutral response allows the participant to avoid forming an opinion and so therefore was not used.

Section III contains open-ended questions seeking further opinions of the participants including the strengths and weaknesses of the texts they use and the format and delivery of course documents. While this type of questioning may require more work for the researcher in analysis, it was deemed ideal to use this style as "the researcher does not know all the response possibilities and wants to explore the options" (Creswell, 2005, p. 364). The format of the question may be deemed to be leading the respondent (and resulting in some response bias) as the question includes some example responses. However, the researcher is of the opinion that these questions (without sample responses) may not have been fully understood. Question 26 seeks the respondent's opinion about any perceived differences in delivering courses in Australia and the USA (another research sub-question). Space was provided in the response boxes to allow fairly lengthy answers. The final question allowed more room should the respondent feel the need to include more information than these response boxes allowed. This question also invites the participant to include any other issues that are not included in the survey. The researcher acknowledges that many academics in this field are passionate about the subject and may wish to express their opinions beyond the scope of the survey.

In the final section of the survey the participants are thanked and invited to provide their contact information for follow-up research. Data from the survey was generated by SurveyMonkey.com in theform of a spreadsheet and graphs according to the questions. From the data, trends were discussed and the literature was added to develop the project.

SUMMARY

This chapter has reviewed the elements of the research methodology. It has explained the mixed method (qualitative and quantitative) approach and highlighted the survey design and respondent contact approach. A full analysis of the results of the survey is presented in the next chapter.

CHAPTER 3

DATA

This chapter highlights the results from the data that was collected through the survey process. It also addresses common themes discovered amongst respondents which will be linked to the literature in chapter 4. As the survey was constructed in three parts, this chapter will also be divided into three parts.

SURVEY ANALYSIS

The survey was conducted between August 21, 2006 and October 3, 2006. The survey provider was www.surveymonkey.com . The number of respondents was 67. The anyalysis of responses to the questions are shown in Tables 6 to 36.

SURVEY PART 1 – DEMOGRAPHICS

In this section, the demographic of the survey respondants was investigated (Tables 6 to 9) – their level of expertise, at which level, for how long and at which type of institution.

Table 6 – Survey results of question 1
Q1. Area of Expertise

	Response Percent	Response Total
Arranging (only)	19.4%	13
Orchestration (only)	9%	6
Arranging AND orchestration	71.6%	48
Other (please specify)	34.3%	23
Total Respondents		67
(skipped this question)		0

In investigating the expertise of lecturers, it was noted that the majority of respondents deliver courses in Arranging and Orchestration (72%). Therefore, in most cases, some expertise in both areas would be needed. Other areas identified included Composition, Performance, Recording, Electronic Music and Conducting. Respondents were able to respond to more than one field.

Table 7 – Survey results of question 2

Q2. Level of subject delivery

	Response Percent	Response Total
Diploma/Advance Diploma	31.3%	21
Degree (Undergraduate/Honors)	**76.1%**	**51**
Post Graduate	41.8%	28
Other (please specify)	7.5%	5
Total Respondents		**67**
(skipped this question)		0

Most teaching of Arranging and Orchestration was found to be at the undergraduate degree level (76%), with 31% identifying at the Diploma/Advance Diploma and 42% at Post Graduate level. Respondents were able to respond to more than one level. This result indicates the level where there would be the greatest usage and application of the project.

Table 8 – Survey results of question 3

Q3. Years Lecturing Arranging/Orchestration:

	Response Percent	Response Total
1 year or less	6%	4
2-3 years	17.9%	12
4-5 years	17.9%	12
5-10 years	10.4%	7
10 years or more	**47.8%**	**32**
Total Respondents		**67**
(skipped this question)		0

The majority of lecturers working in this field have been doing so for 10 years or more (48%) which indicated that the respondents to the survey have, in general, sufficient experience to make informed comments regarding the other sections of the survey.

In Table 9, the majority of respondents are employed by a university (70%) and a minority work in TAFE (24%) and teach privately (21%). The survey allowed for multiple responses so some respondents work for multiple organizations. The "Other" field elicited Defence Force (2) and Private Instruction (4).

Table 9 – Survey results of question 4

Q4. Type of institution:

	Response Percent	Response Total
TAFE college	23.9%	16
University	**70.1%**	**47**
Private	20.9%	14
Other (please specify)	10.4%	7
Total Respondents		**67**
(skipped this question)		0

SURVEY PART 2 – PROFESSIONAL PRACTICE

In this section, the areas of professional practice (of the survey respondants) were investigated (Tables 10 to 30). These areas included who sets course work, who decides if texts are required and what they are, what assumptions are made about students' prior knowledge and what are the important constituents of an arranging text.

Table 10 – Survey results of question 5

Q5. In your place of work, who makes the decisions regarding the setting of the curriculum or a course guide detailing the topics covered for the duration of the course?

	Response Percent	Response Total
You as the lecturer.	77.3%	51
The department head.	22.7%	15
The head of school.	6.1%	4
Other (please specify)	22.7%	15
Total Respondents		**66**
(skipped this question)		1

It is observed that most lecturers (77%) work autonomously in this area. The other responses included: Not current/don't know (2), Lecturers in consultation (8), Training package (2), Panel (1) and Program Co-ordinator (3).

In Table 11 courses that do not use required texts or suggested references are in the minority (24%). This is a positive indication that the project could be useful.

Table 11 – Survey results of question 6

Q6. In the course you deliver, are there texts (and/or suggested reference books) that students require access to?

	Response Percent	Response Total
Yes	75.8%	50
No	24.2%	16
Total Respondents		**66**
(skipped this question)		1

Table 12 – Survey results of question 7

Q7. In your place of work, who makes the decisions regarding the setting of required texts and references for your course?

	Response Percent	Response Total
You as the lecturer.	96.1%	49
The department head.	9.8%	5
The head of school.	5.9%	3
Other (please specify)	11.8%	6
Total Respondents		**51**
(skipped this question)		16

Of the respondents who use texts or references from question 6, 97% set these themselves. This again supports the evidence that most lecturers work autonomously. Other responses included: Lecturers in consultation (3) and Program Co-ordinator (1).

Table 13 – Survey results of question 8

Q8. When are students made aware of the required texts and materials?

	Response Percent	Response Total
They are listed on our website and therefore available before enrollment.	21.6%	11
They are made available in course information delivered on enrollment.	25.5%	13
They are made available in the first lecture/class.	**60.8%**	**31**
Other (please specify)	17.6%	9
Total Respondents		**51**
(skipped this question)		16

The respondents identified that the majority of students undertaking these courses are made aware of the text requirements in the first lecture (61%) and a substantial

number previous to that (47%). Other responses included: Placed on reserve in library (3), In Training package (2). If a project such as the one undertaken in this research was to be used effectively, there would have to be multiple copies available to students in the first lecture/class in most cases.

Table 14 – Survey results of question 9

Q9. Is there any research undertaken into the availability of required texts in your institution's library?

	Response Percent	Response Total
Yes	72.5%	37
No	27.5%	14
Total Respondents		51
(skipped this question)		16

From the response it seems that the majority of lecturers (73%) are conscious of the need to have texts available in their institution's library thus reducing the expense to students if they had to purchase them and building a collective knowledge for the institution.

Table 15 – Survey results of question 10

Q10. In the course that you deliver, do you use:

	Response Percent	Response Total
a prepared set of course notes?	83.1%	49
a single required textbook?	11.9%	7
multiple required textbooks?	25.4%	15
a software based or on-line course method?	3.4%	2
Other (please specify)	22%	13
Total Respondents		59
(skipped this question)		8

This question allowed for multiple responses. In most courses it was found that a set of course notes (83%) was preferred to required text books (37%). Of the required textbooks, it was observed that multiple textbooks (25%) were used more than a single book (12%) supporting the view that there is not one single textbook that is widely used. It was also observed that on-line delivery of courses in this discipline is

not widely used (3%). Other responses included: Handouts (4), Combination text & Notes (3), Musical Scores (1) and Internet References (1).

Table 16 – Survey results of question 11

Q11. If you use a prepared set of course notes, who has prepared these notes?

	Response Percent	Response Total
You as the lecturer.	91.1%	51
The department head.	1.8%	1
An external contractor.	0%	0
Other (please specify)	7.1%	4
Total Respondents		56
(skipped this question)		11

Lecturers are almost exclusively the preparer of course notes (91%). This is a logical finding when considering the results of questions 5 and 7.

Table 17 – Survey results of question 12

Q12. If you use required text book(s), please enter the authors below:

	Response Percent	Response Total
readily available published texts:	95.5%	21
obscure published texts (please also provide publisher):	18.2%	4
unpublished texts:	4.5%	1
Total Respondents		22
(skipped this question)		45

It was observed that if required texts are used, the majority are readily available (96%).

Table 18 lists the authors of the texts cited by the respondents. These books appear in the reference list. Three of the top five ranking books Adler (2002), Blatter (1980) and Kennan (1983) are purely Orchestration books and only two, Mancini (1973) and Garcia (1954), are considered an Arranging text. There was a great diversity observed in the other responses.

Table 18 – Texts cited by respondents in question 12

Readily available published texts:

Author	No.
Adler	11
Berlioz	1
Blatter	4
Delamont	1
Garcia	4
Grantham	2
Grove	2
Karlin	1
Kennan	6
Lindsay	1
Mancini	5
Miller	1
Nestico	3
Nettles & Graf	2
Norman	1
Piston	1
Risati	1
Sebesky	2
Smith Brindle	1
Wright	2

Obscure published texts: Author

Bornstein	2
Forsyth	1
Vella	1

Unpublished texts: **Author**

Belkin	1

Table 19 – Survey results of question 13

Q13 If you use a list of suggested references, please enter the authors below:

	Response Percent	Response Total
readily available published texts:	97.1%	33
obscure published texts (please also provide publisher):	17.6%	6
unpublished texts:	0%	0
Total Respondents		**34**
(skipped this question)		33

Similar results were observed here to question 12 with the majority of references being readily available (97%). Table 20 lists the authors of the texts cited by the respondents. These books appear in the reference list. As in question 12, three of the top four ranking books, Adler (2002), Blatter (1980) and Kennan (1983), are purely Orchestration books and only one, Nestico (1993), is considered an Arranging text. There is also a great diversity in the other responses.

Table 20 – Texts cited by respondents in question 13

Readily available

published texts:

Adler	9	Mancini	4
Aldwell	3	Nestico	5
Berlioz	2	Pease and Pullig	1
Blatter	7	Perschetti	1
Cope	1	Piston	3
Corozine	1	Riddle	2
Del Mar	1	Rimsky-Korsakov	2
Dobbins	2	Roemer	2
Black and Gerou	1	Runswick	2
Fox	1	Russo	1
		Schachter (Aldwell &	
Garcia	1	Schachter)	1
Gilreath	1	Sebesky	3

<div align="center">Sharp and Britten</div>

Grove	3	Folksongs	1
Karlin	1	Stiller	1
Kennan	9	Stolba	1
Lerdahl	1	Sturm	1
Levine	1	Vella	1
Lowell and Pullig	1	White	1
		Wright	4

Obscure published texts:

Eric Bryce	1
Casella and Mortari	1
Rimsky-Korsakov	1
Widor	1
Polansky	1

Table 21 – Survey results of question 14

Q14 If you use a software based or on-line course method, please enter details below:

Total Respondents	6
(skipped this question)	61

Details: Own Software (1), Moodle (1), Encore (1) Free course based on Korsakov's book (1) Incorrect entry (1)

As previously observed, on-line course delivery is not popular (9%) and adjusting for the fact that Encore is a notation program (not an on-line course) and for one incorrect entry, the correct result is only 6%.

Table 22 – Survey results of question 15

Q15 What assumptions are made in the background knowledge of students entering your courses?

		Response Percent	Response Total
None.		8.5%	5
Basic notation (e.g., clefs, note values, note pitches).		83.1%	49
Triadic chord and scale construction.		83.1%	49
Basic forms, progressions and the cycle of 4th's (e.g. II-V-I and turnarounds).		67.8%	40
Chord extensions and altered chords.		42.4%	25
Tritone substitutions.		25.4%	15
Harmonic cadences.		50.8%	30
Basic voicing styles (e.g., close and open position, inversions). Transposition.		39%	23
Common instrument transpositions.		20.3%	12
Common instrument ranges.		16.9%	10
Familiarity with computer notation programs (e.g. Sibelius, Finale).		33.9%	20
Other (please specify)		13.6%	8
Total Respondents			**59**
(skipped this question)			8

This question was useful in determining which areas would need to be included in the project. If the lecturers make assumptions about previous knowledge (e.g., 83% assume previous knowledge of basic notation) then this need not be included, or could be summarised, in the project. Depending on the outcome of question 16, any area ranking 50% or less should be considered for inclusion. Other responses included: Aural Acuity (1), Orchestral Score Reading (1), Song Structure (1), Instrumentation (1) and Styles (1).

Table 23 – Survey results of question 16

Q16 The important theoretical constituents of an Arranging textbook should include (but not be limited to):

	Response Percent	Response Total
Basic concepts of standard notation and nomenclature. Transpositions and instrument ranges.	84.7%	50
Voicing styles.	**86.4%**	**51**
Basic analysis of tunes including form, melody, harmony and cadences.	66.1%	39
Melodic development.	54.2%	32
Reharmonization and chord substitutions.	64.4%	38
Counterpoint.	47.5%	28
Scoring for the rhythm section.	83.1%	49
Small ensemble arranging.	**86.4%**	**51**
Brass scoring and standard methods.	79.7%	47
Woodwind scoring and standard methods.	78%	46
Big band arranging concepts.	71.2%	42
Analysis of published scores.	72.9%	43
A historical perspective of arranging.	44.1%	26
Orchestral orchestration.	47.5%	28
Arranging for voices.	64.4%	38
Arranging for Concert Band and Brass Band.	39%	23
Extended arranging techniques.	49.2%	29
Scoring for film.	23.7%	14
The use of software packages.	30.5%	18
Arranging for young performers.	42.4%	25
Publishing and copyright.	37.3%	22
Other (please specify)	27.1%	16
Total Respondents		**59**
(skipped this question)		8

Other responses included arranging for rock band(1), using acoustic & electronic sources (2), bass line writing (1), percussion (1), world music (1) and non-standard/flexible instrumentation (1)

The majority of lecturers felt that most areas listed should be included in an arranging textbook. Only the areas of film scoring and software packages received a response of 30% or less. As only 27% of respondents used the "other" response for a variety of topics, it can be deduced that there were no other important areas that were not listed in this part of the survey.

Table 24 – Survey results of question 17

Q17 There does not exist one single published textbook that satisfies the needs of the course(s) I deliver without the use of additional notes or texts.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	4% (2)	7% (4)	5% (3)	**47% (27)**	37% (21)	**4.07**
				Total Respondents		57
				(skipped this question)		10

There was a response to this question of 80% of lecturers either agreeing or strongly agreeing with the statement. This was also supported by the findings in question 10.

Table 25 – Survey results of question 18

Q18 Most published method books or texts demonstrate good arranging and/or orchestration technique and fail to contrast with examples of poor technique.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	0% (0)	5% (3)	**42% (24)**	30% (17)	23% (13)	**3.70**
				Total Respondents		57
				(skipped this question)		10

Only 5% of respondents disagreed with this statement thus supporting the statement.

Table 26 – Survey results of question 19

Q19 It is important that students have access to audio examples demonstrating the arranging and/or orchestration technique being presented.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	0% (0)	0% (0)	0% (0)	23% (13)	**77% (44)**	**4.77**
				Total Respondents		57
				(skipped this question)		10

It was observed that the majority (77%) strongly agree and the remaining 23% agree with this statement. This justifies the inclusion of audio examples in the project.

Question 20 (see Table 27) was unintentionally the same as question 18. It did, however, provide a resonable check that the results were comparable to question 18.

Table 27 – Survey results of question 20

Q20 Most published method books or texts demonstrate good arranging and/or orchestration technique and fail to contrast with examples of poor technique.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	0% (0)	6% (3)	42% (22)	34% (18)	19% (10)	3.66
				Total Respondents		53
				(skipped this question)		14

Table 28 – Survey results of question 21

Q21 It is possible to deliver an Arranging course as an online course if students have access to scoring and playback software.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	2% (1)	16% (9)	40% (23)	28% (16)	14% (8)	3.37
				Total Respondents		57
				(skipped this question)		10

The response to this statement was relatively neutral with the average being 3.37 (on a scale of 1 to 5). As the results to question 14 showed that online courses are not generally being used, this would concur with most respondents remaining neutral.

Table 29 – Survey results of question 22

Q22 It is possible to deliver an Orchestration course as an online course if students have access to scoring and playback software.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	2% (1)	14% (8)	35% (20)	37% (21)	12% (7)	3.44
				Total Respondents		57
				(skipped this question)		10

The response to this statement was fairly neutral with the average being 3.44 (on a scale of 1 to 5). As the results to question 14 showed that online courses are not generally being used, this would indicate that most lecturers have not put much thought to the concept. With 37% agreeing and 12% strongly agreeing, this suggests that there is scope for producing an online course.

Table 30 – Survey results of question 23

Q23 It is important that students hear their project work played by musicians (as opposed to software instruments) and therefore, a course in Arranging or Orchestration should incorporate at least one session with an ensemble (either present in the class or have recordings made externally and delivered to the students).

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Response Average
Your response	0% (0)	2% (1)	12% (7)	23% (13)	63% (36)	4.47
					Total Respondents	57
					(skipped this question)	10

The majority of respondents (86%) agreed or strongly agreed with this statement.

SURVEY PART 3 – SHORT ANSWER QUESTIONS

In this section, short answer questions were offered to the respondants (Tables 31 to 36). This allowed respondents an opportunity to offer their own opinions in certain areas and raise concerns that may not have been addressed in previous questions.

Q24 If you use a specific text book(s) in the course(s) that you deliver, what are the strengths and weaknesses (in your opinion) of these books? (For example, 'The Contemporary Arranger' by Sebesky (1975) may be a sufficient resource for your class without having to produce additional sources. Or 'The Complete Arranger' by Nestico (1993) book may have excellent audio examples available. Or 'Music Arranging and Orchestration' by Cacavas (1975) book may be considered a little limited and old fashioned in its discussion of big band arranging.)

Table 31 is a summary of the responses received. The texts observed to be most widely used in questions 12 and 13, Adler (2002), Blatter (1980) and Kennan (1983), received the most favourable responses in that they covered fundamentals well and had good examples. It is of interest to observe that some texts received mixed and sometimes contradictory responses thus indicating the level of subjectivity in evaluating Arranging texts.

Table 31 – Summary of responses received to question 24

Adler

Comprehensive	1
Cover fundamentals well	5
Mistakes/ missing detail	1
Needs more analysis of orchestrational style	1
Good CD & workbook	3
Limited audio examples	2

Baker

Good voicing & counterpoint discussion	1
No audio examples	1

Blatter

Comprehensive/concise	1
Cover fundamentals well	3
No audio examples	2

Garcia

Techniques explained well	1

Gilreath

Simple but inspiring	1

Grove

Good reference	1
Not selective enough in content	1
Well laid out	1
Good coverage of small to large densities	
In-depth	1
Good modern approach	1
Good written examples	1
Too much American jargon	1
Too dense/overwhelming (for students)	2

Karlin

No discussion of orchestration	1
Easily outdated	1

Kennan

Good score examples	2
Contemporary techniques	1
Old fashioned	2
No discussion of band technique	1

Lindsay

Excellent for voicing large horns	1
No discussion of small horns	1
No discussion of melodic line crafting	1

Mancini

Insufficient explanations	1

Nestico

In depth discussion of concert band writing	1
Good introduction	1
Good musical examples	1
Too specific to jazz	1
Insufficient explanations	1

Prout

Good basic text	1

Riddle

Little scattered	1
Good information	1
Insufficient explanations	1

Rimsky-Korsakov

Too romantic in language	1

Sebesky

Insufficient explanations	1

Sturm

Contrasting styles	1

Wright

Assumes knowledge	1
Good examples	2
Dated examples	1

No discussion of rhythm section	1
Interviews useful	1
Techniques explained well with contrasts	2

Positive aspects of these texts included their comprehensiveness, covering fundamentals, the inclusion of audio examples, and the use of good examples. Negative responses included the text being old-fashioned or dated, insufficient explanations, incomplete discussions and no audio examples.

Q25 If you use your own course notes (in conjunction with a text or not) in the course(s) that you deliver, (1) please give a brief description of the construction of these notes, (2) the major sources of these notes and (3) the format of these notes (e.g., a bound document, hand outs each class, on-line documentation) along with (4) your opinion as to your satisfactory delivery of the course using your notes. (e.g., I'm not satisfied that my notes cover enough ground in reharmonization and therefore I use extracts from 'The Jazz Harmony Book' by Levine (1995) as an additional text).

Table 32 summarises the responses and reveals that most lecturers construct their course notes from either their own experience (46%) or from several texts (32%).

Table 32 – Summary of responses received to question 25 parts 1 and 2.

Scores	7
From several texts	13
From own experience	19
Industry professionals	1
Internet	1

Table 33 reveals that the majority of lecturers use handouts (71%).

Table 33 – Summary of responses received to question 25 part 3.

Hand outs	22
OHT	3

Live examples/listening	1
PowerPoint	1
Online	1
Printed and bound	3

Table 34 summarises the survey responses and reveals that 33% of respondents are satisfied whereas 25% would like to update, expand or better organise their own notes.

Table 34 – Summary of responses received to question 25 part 4.

Satisfied	4
Most of the texts available are not comprehensive enough generally	1
Not enough time	1
Most of the texts used have limited space for student participation	1
Most of the texts focus only on arranging or orchestration	1
Most of texts do not deal with the unique sound of MIDI	1
Would like to update, expand & better organize own notes	3

Table 35 reveals that the majority (83%) of respondents who replied to this question said that there was a difference in Arranging and Orchestration pedagogy in Austalia/New Zealand (compared with the USA) and 45% of these said this was due mainly to the fact that there is limited teaching time and less performance opportunities in Australia. It should be noted that that the majority of respondents either skipped this question or made no comment.

Table 35 – Survey results of question 26
Q26 Do you consider there any differences in Arranging and Orchestrational pedagogy in Australia/New Zealand and the USA? If yes, please give some insight to your opinion.

Yes	1
Yes in terminology	1
Yes Australia more broader scope	1
Yes USA more big band orientated	4

No comment	10
Yes more limited teaching time and less performance opportunities in Australia	9
Yes, USA more progressive and technology focused	1
Yes, Orchestration more band oriented in USA	3
No	4
Skipped question	29

Q27 Any further comments or issues not addressed in this questionnaire that you feel are important?

Question 27 revealed mostly positive responses to the project, many encouraging and stating that this project would be useful. For example, respondent 267711815 said, "Great area of study and I'll buy the book when it's done" and 287991124 said, "A text which is easy to follow with short clear examples covering different stylistic genres would be a useful resource. In my experience I've had to develop an entire curriculum due to insufficient resources being available which directly relate to our course."

There were comments made regarding the importance of technology such as respondent 287929927 who stated, "A modern and comprehensive text geared to today's needs, and incorporating music technology would be welcome." Respondent 267793445 said, "Soft Synths have become a useful tool for our work", 284337890 said, "The management of moving parts is an enviable skill in today's world of loops and samples etc.", 287935023 said, "Electronic arranging, un-notated, produced (for that glossy shine), simple, repetitive and immediate is a force to be reckoned with", 288020770 said, "A list of current computer programs for students would be helpful" and 294247602 said, "I think some emphasis should also be placed upon writing for TV, Pop groups and the use of electronic devices."

There were also comments made regarding the subject area of film and television. Respondent 269528296 asked, "Do you intend that there should be guidelines on how to arrange for a Chorale style or contemporary styles prevalent today in film?"

288020770 asked, "What programs do film composers use most?" and 294247602 said, "I think some emphasis should also be placed upon writing for TV." Web-based learning was another issue raised. Respondent 288325792 said, "Web based teaching would be great in principle but I find most administrators and other proponents lack genuine understanding of to how much time is involved in a. programming good interactive teaching   b. marking, reporting and building a proper interactive discussion of completed exercises." Respondent 288020770 said, "Not sure if you are only planning a book but a website with arranging resources would be fantastic."

Table 36 – Survey results of question 28
Q28 If you are interested in any follow up research on this subject, please provide your contact information. In providing your contact information, you acknowledge that your anonymity may be compromised, however, your data will be kept confidential.

	Response Percent	Response Total
Name:	100%	37
Contact Email:	94.6%	35
Contact Phone:	73%	27
Total Respondents		**37**
(skipped this question)		30

This final question allowed respondents to forfeit their anonymity and 55% were happy to do so. This provides a further indication that the majority of lecturers were supportive of the research aimed at improving the delivery of subject material.

SUMMARY

The survey established that the majority of respondents had been working for at least 10 years, autonomously, in the field of Arranging and Orchestration at the tertiary level. Most had used their own course notes, delivered as handouts. The most widely used required texts or suggested references were books by Adler (2002), Blatter (1980), Kennan (1983), Nestico (1993) and Mancini (1973). On-line courses were not widely used, however, this may be due to the unavailability of a useful on-line course.

The components of the proposed project were widely accepted as being essential and there was agreement that there was not currently one single textbook that could be used as a course book. The responses supported the view that there should also be audio examples included, however, it is still considered important that students hear their own work played by real musicians. Most respondents agreed that there is a difference in delivering an arranging course in Australia and the USA, which would again indicate that an Australian produced course guide would be beneficial.

The following chapter will link the results of this chapter, the literature and the sections of the project text.

CHAPTER 4

LITERATURE

This chapter highlights the survey results reported in chapter 3 and the results of the literature search in conjunction with the elements and sections of the project text. A comprehensive literature search was undertaken to establish which sections of the project were included in published arranging textbooks. Table 37 was derived from a search of fourteen selected arranging textbooks for the inclusion of thirty-four proposed topics. While the majority of topics were included in at least half of the textbooks, other topics were investigated further as part of the survey of Australasian lecturers. It was not assumed that the non-inclusion of a topic in the majority of reviewed texts related to the topic's lack of importance in the teaching of Arranging. The results and analysis of this search are included throughout this chapter where these texts will be discussed in detail and will justify and support the contents of the sections in the project.

Table 37 – Selected Arranging method books and subject inclusions

Topic	Riddle	Rutherford(I&II)	Mancini	Sebesky	Nestico	Baker, David	Levine	Corozine	Baker, Mickey	Lindsay	Delamont	Garcia	Grove	Lowell & Pullig
Standard Notation					X	X	X			X		X	X	X
Chord Symbols	X				X	X	X			X		X	X	
Transpositions	X	X	X	X	X	X				X	X	X	X	X
Instrument Ranges	X	X	X	X	X	X		X		X	X	X	X	X
Score Order	X	X	X		X			X		X				X
Software/MIDI		X			X									
Lead Sheets		X					X							
Analysis of Tunes		X						X		X				
Form	X	X			X	X	X			X	X	X		X
Melody		X			X	X			X	X	X	X	X	
Cadences		X												
Melodic Development		X				X					X	X	X	X
Harmonic Colour		X										X	X	
Chord Substitutions		X			X	X	X					X	X	X
Counterpoint		X			X			X	X		X	X	X	X
Rhythm Section Scoring	X	X	X	X	X	X			X	X	X	X	X	
Percussion	X		X	X	X								X	
Small Ensemble Arranging		X	X		X	X		X		X	X	X		
Densities		X				X			X	X	X		X	X
Close & Open Positions		X		X	X	X		X	X	X	X	X	X	X
Drop 2		X		X	X	X			X	X		X	X	X
Clusters		X		X	X			X		X		X	X	X
Sax Voicing	X	X		X	X				X	X	X	X	X	X
Brass Voicings	X	X	X	X	X				X	X	X	X	X	X
Mutes	X		X	X	X					X	X			X
French Horns/Tuba	X		X	X	X					X	X		X	X
Woodwinds	X		X	X	X					X	X		X	X
Strings	X		X	X	X					X				
Analysis of Arrangers		X						X						X
Orchestration			X	X	X			X	X		X			
Voices	X			X					X			X		
Film Scoring	X													
Scoring for Youth					X									
Symphonic Band					X									

DISCUSSION

Learning the rules

The whole purpose of an arranging method book is to establish some rules and guidelines for the student. Thomas (1973) said, "Know when to use rules, and when not to". Emil Soderstrom (McKenzie, 2006a) said, "Learn the rules, learn the rules, now you know what to break". Clayton (2006) in response to a question from a University graduate about finding books to increase his musical knowledge said, "I would recommend writing your own book". Bob Mintzer (McKenzie, 2006b) said, "in order to write, you must first learn the vocabulary".

Is it possible to learn arranging from a book?

Amongst industry professionals, there appears to be cautious support for the notion that arranging can be learnt from a book. Bill Broughton (McKenzie, 2006a) says, "If you're beginning, absolutely!... I think if the method is well written, you can gain a lot of knowledge". Stephen Newcombe (McKenzie, 2007a) also agrees but states with caution, "not in the sense that you can just read it and know how to arrange". He argues that it is an on-going process including other factors such as listening. There must therefore be more to learning arranging than simply reading a book. Belkin (2001) states that "no one should expect to learn orchestration just by reading this book!" Ed Wilson (McKenzie, 2008) says that he never learnt arranging in a formal setting but has since read several good books.

In the survey analysis, 63% of respondents strongly agreed and 23% agreed that it was important that students heard their work played by musicians and not software instruments. This cannot be achieved using a book as the only teaching resource – it must be done in a situation where players can play the works. This project therefore is not designed to be the exclusive source of knowledge but a guide to what should be taught and where additional information can be obtained.

What is the current body of thought regarding published textbooks?

In deciding on a model to follow, it was an important part of the reseach to investigate what the current body of thought amongst industry professionals was regarding pubished textbooks. Broughton says,

> I've got 'Sounds and Scores' by Henry Mancini, I've got Sammy Nestico's book and I find them great resources. . . . The old Piston books are good but they're dated because the players do so much more than what you see in books. The newer ones are better like the Don Sebesky book. (McKenzie, 2006a)

Ed Wilson recommends, "Russ Garcia's two books. Sammy Nestico's book. Don Sebesky's book. Inside the score by Rayburn Wright" (McKenzie, 2008). Bob Mintzer (McKenzie, 2006b) recommends the books by Sebesky (1975), Nestico (1993b), and Lindsay (2005). Mintzer (Lindsay, 2004a) also said, "Gary Lindsay has come up with a comprehensive text that covers all pertinent information pertaining to arranging for various size jazz ensembles . . . . Jazz Arranging Techniques is one of the most comprehensive books on the subject. It really is a cool book." Maria Schneider (Lindsay, 2004a) said, "I fully expect that Jazz Arranging Techniques will become the textbook of choice in college courses on arranging and for people who wish to study on their own". Jim McNeely (Lindsay, 2004a) said, "Jazz Arranging Techniques is full of very useful information. The musical examples are clear and instructive and the exercises are really useful . . . . I'm going to put it on my 'highly recommended' list for my students."

Dean Sorrenson (personal communication 2006), director of Jazz studies at the University of Minnesota, uses the following books as texts in arranging classes:

1. Bill Dobbins' Linear Approach (1986). He uses 2 tunes and voices them for 2 horns then 3, 4 and 5 in different styles including chromatic parallel.
2. Fred Sturm's book (1995). He looks at Arranging from a historical perspective, exploring about 5 tunes. Each tune is presented as arranged by several arrangers. He examines the styles, voicings, intros, codas etc.

Dunscombe and Hill (2002, p. 331) list recommended arranging books by: Alexander (1971) , Baker (1985), Coker (1998), Delamont (1965), Dobbins (1986), R.Garcia (1954), Goldstein (1981), Grove (1972), Mancini (1973), Mahronic (1979), Miller (1992), Naus (1998), Nestico (1993b), Pease (2001), Riddle (1985), Russo (1961), Sebesky (1975), Sturm (1995) and Wright (1982).

Who is using what?

Another important step in the modelling of a text, was to investigate who was using what textbooks in tertiary study both in Australia and internationally. Gary Lindsay (2004b) claims that his book is being used by: Florida International University (Miami, FL), Guildhall School of Music and Drama (London, England), Southwest Community College (Creston, IA), University of Adelaide (South Australia), University of Miami (Miami, FL), Western Michigan University (Kalamazoo, MI), University of Denver (Denver, CO), University of Northern Iowa (Iowa), New World School of the Arts (Miami, FL), Middle Tennessee State University (TN), Saddleback College (Mission Viejo, CA), and Hofstra University (NY).

From the survey results the most popular required text book was Adler (2002) (11%) followed by Kennan (1983) (8%) and Mancini (1973) (5%). Other readily available published books used are Del Mar (1983), Aldwell and Schachter (2002), Persichetti (1961), Runswick (1993), Adler (2002) Berlioz (2002), Blatter (1980), Delamont (1965), R. Garcia (1954), Grove (1972), Karlin (2004), Lindsay(2005), Miller (1992), Nestico (1993b), Nettles and Graf (1997), Norman (1998), Piston (1955), Prout (2003), Risatti (1975), Sebesky (1975), Smith Brindle (1986) and Wright (1982) There were also a few obscure published texts quoted being Bornstein (1964), Forsyth (1935), Vella (2000) and the online text by Belkin (2001). In addition to these books, numerous books were cited as suggested references.

Stephen Newcomb at Griffith University (Brisbane) uses Wright (1982) in addition to Dobbins (1986). He says, "there's a few of those in the library but I suppose they're used for reference in the course, they're not actually used as a textbook"(McKenzie, 2007a).

Claire Fischer (cited in *Advance Music Insite Item Of The Month: Bill Dobbins: Jazz Arranging and Composing*, n.d.) comments on the Dobbins book saying, "It is the first book to provide a clear and logical bridge from the more basic techniques of arranging and melody harmonization to the more advanced linear methods employed by some of the most interesting and influential jazz arrangers and composers. The

musical examples and scores are well organized and the analysis is clear and accessible".

It is clear that there are numerous opinions about which book is the most suitable to use. There are a few however, that appear to stand out: Dobbins (1986), Lindsay (2005), Mancini (1973), Nestico (1993b), Nettles and Graf (1997), Sebesky (1975) and Wright (1982). These books were reviewed (Table 37) as part of the research to determine the content of the project text.

Importance of CD/audio examples
Whether to include a CD of audio examples was another question to investigate. Lowell and Pullig (2003) discuss the importance of using a "recorded demonstration in order to actually *hear* – and eventually internalize the sound of – the musical effect" (p. vii). Broughton (McKenzie, 2006a) says, "I think the hard thing about being a young writer is that they don't get to hear what they write and these books [referring to Nestico & Mancini] have samples". The survey found that the majority (77%) of respondents strongly agreed and the remaining 23% agreed that CD/audio examples should be included. Newcomb (McKenzie, 2007a) compiles a large list of CDs to listen to in the library.

In providing audio examples on CD with the project, musical examples in the text that were considered difficult to play by a lecturer (or student) on a keyboard were included on the CD. Simpler text examples are not included on the CD. Examples of commercial recordings are included, which will have copyright considerations if the project were to be commercially produced.

Historical Perspectives
Bill Broughton (McKenzie, 2006a) says that a knowledge of the history of Arranging is vital. "Analysis of the evolution of music genres is beneficial from a historical perspective" (Corozine, 2002, p. ix). Gilreath (2004, pp. 1-10) discusses the history of orchestration. Carse's (1964) book is entirely about the history of orchestration. It is therefore beneficial to include references to arrangers that are historically significant rather than only focus on the works of contemporary arrangers.

RELATION OF THE DATA AND LITERATURE TO THE CHAPTERS OF THE PROJECT TEXT

This section is an investigation of the content of the chapters (and sections) of the project text in relation to the data and literature reviewed. Where possible, evidence supporting the inclusion of material in the project has been cited. Although a full replication of the project in this study is not intended, all examples, quotes and listed recordings from the project are fully referenced in this chapter.

PROJECT INTRODUCTION SECTION

The introduction section of the project includes many quotes such as "Music is something of a mystery" (J. B. Davies, 1978, p. 25). Indeed the origin of some quotes is also mysterious. Frank Zappa (Patterson, 2006) once said that "Talking about music is like dancing about architecture". It is unclear where this quote originated. According to Scott (2006) this quote has been attributed to many people but most commonly to Zappa. Duke Ellington *(IAJE Jazz Cryptoquote*, 2006) said, "If it sounds good and feels good, then it is good!". This should always be the end result in any discussion of Arranging technique. Sacks (2007, p. 96) discusses how musical competence is gained in the same way as linguistic competence. "Musical potential, like other potentials, needs stimulation to develop fully."

> To say that musical theory is based on a set of largely invented rules rather than on a set of natural laws is no to diminish it, however. The rules define the area within which the artistic endeavor takes place. They make possible such things as aesthetic deviation, confirmation or disconfirmation of expectancy, and the deliberate violation of rules for aesthetic effect, all of which are critical events as far as musical cognition is concerned… there can be no art without some kind of constraint. (J. B. Davies, 1978, p. 19)

The remainder of the introduction explains how to read the book.

PROJECT DEFINITIONS SECTION

This section of the project is an abbreviated version of the earlier section discussing the contradictions amongst definitions found for Arranging and Orchestration. Brinkman (n.d.) devotes a complete chapter to definitions.

The Harvard Dictionary of Music (Randel, 2003, p. 58) defines Arrangement as "The adaption of a composition from a medium different from that for which it was originally composed, usually with the intention of preserving the essentials of the musical substance." Corozine (2002, p. 3) cites this definition as well as one from the American Federation of Musicians that states "Arranging is the art of preparing and adapting an already written composition for presentation in other than its original form. An arrangement may include reharmonization, paraphrasing, and/or development of a composition, so that it fully represents the melodic, harmonic, and rhythmic structure". Gilreath (2004, p. v) uses this definition.

> Orchestration is different from composition. In composing, I hear the instruments in my head as I'm composing. It is inseparable, to me, from the creative process. Orchestration is a different matter. You take a piece of music [composed] by someone else and arrange it for some group of instruments--or for a different or smaller or larger group--or you dictate it from a recording because no one has any written music for the piece. (Burton, as cited in Dimock, 1998)

An Orchestrator "does not usually alter the musical quality, harmony, or rhythm. He or she just scores the composition so that it is consistent with the instrumental and vocal capabilities of the artists" (Field, 1995).

McNeely (Tafuri, n.d.) suggests:

> An arrangement is a process that's done to a song. I think of the song as the main character of the whole play, and your job as an arranger is to present that character and, by the end of the arrangement, we have some insight into the tune, into the character.

Russo (1961, p. 8) calls arranging "recomposition" while Allen (2000, p. 1) paraphrases the Munro (1987) definition – the definition used within this project's text.

PROJECT CHAPTER 1 – BASICS

Chapter 1 of the project deals with basic concepts including notation, nomenclature, transpositions and instrument ranges. Lowell and Pullig (2003, p. vii) discuss how new arrangers should start with a review of basics and that more experienced arrangers should also refresh their knowledge. Eighty three percent of respondents to the survey agreed that basic notation should be known by students before entering tertiary courses (Table 22). Eighty five percent of respondents to the survey agreed that basic concepts are an important constituent of an arranging textbook (Table 23).

Project Section 1.1 – Standard Notation and Nomenclature

Fifty percent of published texts investigated (Table 37) include a chapter on standard notation. "Music notation has always been excruciatingly inadequate" (Russo, 1961, p. iii). This quote in the project was followed by a statement that music notation is simply a code.

Some supporting references include Nicholas Cook (*Verbatim*, 2006), who wrote that "music is a code in which the deepest secrets of humanity are written", Ettore Martin (*MP3s: Soundsky.com*, 2000) who wrote that "music is a code that nature has given us and which allows us to go beyond oral or written language", Thomas Swiss (Swiss, 1996) who stated that "music is a code that defines the ordering of positions of power and difference that are located in the aural landscape of sound" and Mangore.com (*Read Music Notation*, 2005) (also Barstow & Rothberg, 2002) stating that "music notation is a code".

Chord Symbols are discussed in this section of the project text. Fifty percent of published texts investigated (Table 37) include a chapter on chord symbols. The Answers.com (*Answers.com*, 2006) site states that "In music and music theory, a chord is three or more different notes or pitches sounding simultaneously over a period of time. . . . Originally, a chord simply meant the sounding together of

different tones". The article goes on to discuss the characteristics of chords including the number of notes, intervals contains and quality.

> In jazz the readability and understanding of chord symbols and written music in general is most important . . . we have chord symbology that is not universal and subject to much tampering and innovation . . . Chord symbols are a form of abbreviation and should be as simple as possible. (Nettles & Graf, 1997, pp. 19, 22)

Blood (1999, p. 30) includes an extensive table of chord symbols and their meanings. "There is no one single set of standard chord symbols" (Levine, 1995). Russo (1961, p. 1) refers to chord symbols as a "musical shorthand." He states that "a letter without any number indicates a triad", uses min for minor, maj7 for major 7, and prefers the #5 and b5 terminology.

Broughton (McKenzie, 2006a) mentions the Nestico (1993b) book as an excellent source to establish a consistent method of writing chord symbols. He says, "I'm used to putting "ma 7" not the triangle. I'll use the circle for diminished seven but I don't use half-diminished, I use 7b5s" and receives no complaints from his musicians largely due to consistency. He also says that "M7" should never be used for "maj 7" (this is included as a tip in the project). This is also recommended by Fairlane (2006, p. 7) and Noone (2006, p. 7). Unfortunately the use of M7 for major 7 is recommended by Corozine (2002, p. xii) thus proving the inconsistency amongst texts in this area.

Pease and Pullig (2001, p. iv) say that harmonic ambiguity should be overcome. Nettles and Graf (1997, p. 48) state that the chord sequence Ebm7b5 – Ab7b9 – Db appears in Tchaikovsky's "Romeo and Juliet" (1870, pp. 25-26). "It sounds like a jazz chord progression, although this piece was composed . . . in the 19th century". They argue that the D/C chord is the same as Cmaj7(#11) (p. 130) and G-7/C = C7sus4 (p. 131). Slash chords with a diagonal line mean a complete upper chord with a single not in the bass while a horizontal line means two complete chords (p. 136) N.C. = No Chord (p. 178).

Project Section 1.2 - Transpositions

Most of the arranging texts in Table 37 include discussions of transpositions and instrument ranges. Lowell and Pullig (2003, pp. 1-2) devote two pages to transpositions of common instruments and Pease and Pullig (2001, pp. 2-4) devote three pages.

Whether to score in Concert pitch or Transposed pitch is a matter of personal preference. Bruce Broughton (Schelle, 1999) writes in concert pitch and the copyists transpose. Lowell and Pullig (2003, p. 26) state that transposed scores are the industry standard, however, concert scores, favoured by certain conductors and for analysis purposes, should state that they are in concert pitch.

Project Section 1.3 - Instrument Ranges

Most of the published texts investigated (Table 37) include a chapter on instrument ranges. Lowell and Pullig (2003, pp. 3-8) and Pease and Pullig (2001, pp. 5-10) devote six pages to Instrument Ranges and sound characteristics of common instruments. Shown in stave form are the limits of the practical range and theoretical extremes. They also state that the upper limit for brass instruments are set by the technical limits of the individual player. Russo (1961, pp. 11-12) shows the ranges of the common big band instruments and describes how wind instruments have difficulties in the extremes of ranges. Bill Broughton (McKenzie, 2006a) says that knowledge of instrumental ranges should be common knowledge amongst arrangers. "When you don't know the abilities of the musicians in a band, play it safe by remaining within the practical range" (Lowell & Pullig, 2003, p. vii).

Project Section 1.4 - Score Order

Several of the books in Table 37 and other sources such as Thomas (2003), discuss the importance of using established score layout.

Project Section 1.5 - The use of Software Packages

Many sources discuss the use of software packages and computers in arranging. Broughton (McKenzie, 2006a) says, "I use Finale. Sibelius is intellectually user friendly . . . it probably saves me 40% of my time… the fonts are beautiful." John Altman (Mellor, 2001) says "I don't have a computer or a synthesizer. I find writing out music is quicker than doing it on a computer . . . Technology just gets in the way." Broughton (McKenzie, 2006a) (in reference to students using software playback) says, "a lot of them don't know their Orchestration. You need to know the instruments . . . The General MIDI sounds are pretty bad". Ed Wilson (McKenzie, 2008), who uses Sibelius, says that there are advantages in using software such as "you can (hear) wrong notes which saves rehearsal time. You present a clean copy for the band to read".

Mintzer (McKenzie, 2006b) says that "a downfall of using Sibelius is that what can be played back by the computer, is not always playable by real instruments". Pease and Pullig (2001, p. viii) comment that, ideally, live musicians should play your arrangements. Gilreath (2004, p. vi) discusses this problem and states that "compiling four identical French horn samples to form a virtual section does not yield the same sound as what is achieved by four live horn players playing simultaneously." John Labarbera offers the following insight:

> Check out what the old guys did without sequencers then use your ears more than your machines. Too often I see students bring in work done solely on the computer that doesn't work or has no definition or color. It just lays there. There are countless reasons why but I think one of the main culprits is the reliance on the artificial sounds and a false sense of fullness based on the playback. (LaBarbera, 2004)

With regard to the statement made in the project about proofreading, Lowell and Pullig (2003, p. 25) suggest, "Be sure to proofread your score for errors and omissions, especially if you are using computer software".

The following quotes support the statement made in the project about presentation:

> If it looks great, it'll sound great . . . Players are lazy – if it's not on there, they're not going to play it . . . preparation is everything - on the spot, ready to go, boom, and no questions – leave the questions to somebody else. The presentation of the music is absolutely paramount to what you're going to get out of it. (Broughton, as cited in McKenzie, 2006a)

Mintzer (McKenzie, 2006b) says, "always know what it sounds like BEFORE the rehearsal – there should be NO QUESTIONS from the musicians". Cole (1996, p. viii) says, "Ensure that the players have something neat to read . . . players should not be expected to do your composing for you".

PROJECT CHAPTER 2 – BEFORE YOU START YOUR FIRST CHART

The second chapter of the project deals with all the processes involved in preparing to write an arrangement.

Project Section 2.1 - Arranging Styles

Three styles of arranging are discussed in the project. The first, Simple Arranging, is decribed by Brigham Young University's Andrew Dabczynski (2002, p. 4) as deciding who will play the top and bottom lines with brief musical analysis.

The second is Skilful Arranging. "Skilful arranging should avoid adjustments that actually alter a tune in the process! The successful arrangement enhances the original composition itself. Obviously, arranging can become quite subjective" (Rutherford, 2000a, p. 1). "Skilful Arranging requires a vivid imagination that is able to deftly combine elements of harmony, counterpoint, and musical form" (Corozine, 2002, p. 3).

The third is Advanced Arranging which is the logical extension of the first two styles.

Project Section 2.2 - Balance, Economy, Focus, Variety, Purpose and Inspiration

The four basic factors discussed in the project are Balance, Economy, Focus, and Variety. "There are four basic factors that are essential in the construction of a good arrangement: Balance, Economy, Focus, and Variety" (Sebesky, 1975, p. 2). Oregon State MUS443 Arranging notes cite these same Sebesky (Birdwell, 2005b) four basic factors.

Balance

Broughton (McKenzie, 2006a) agrees that tunes can be over harmonized to the point that they become unrecognizable so a balance in terms of harmony is essential. Corozine (2002, p. 3) says that full sounding tutti should be used sparingly or the result will lack "color and transparency of texture". This points toward a need for balance of instrumentation.

Economy

The statements made in the project can be supported by the following quotations. Sometimes "Less is More" (Sebesky, 1975, p. 4). Broughton (McKenzie, 2006a) says, "Be economical, take one idea, build the idea, and forget the others – you've got those for the next time". Reference is made in the project to Ravel's orchestration of *Pictures at an Exhibition* (M. P. Mussorgsky, 1929).

Mintzer (McKenzie, 2006b) supports the idea of being prepared to rework ideas by stating, "Change things as necessary as you write. For example, the harmony may be changed to suit a melody." Lachlan Davidson constantly revises his scores such as his piece "Upon a Rock" (2004a). "Do not accept mediocrity. Always be seeking to improve and learn" (Davidson, 2007c). Nestico (2002) says that he has almost 600 pieces published but there are only about 30 of them that he likes. "I liked them all when I wrote them, but six months later I'd start cringing when I'd hear them. I could do better now."

Focus

The use of Focus as key element in the project is by supported by Wakker and Wakker (2001) who say, "The melody should be supported by the accompaniment, not distracted". Pankhurst (2001) describes how Schenkerian analysis distinguished three different layers of music: Foreground, Middleground and Background. The melody needs to be in the foreground.

Variety

Variety, discussed in length by Thomas (2003), is an important factor in achieving tension and release. Lowell and Pullig (2003) state that "Variety and contrast are the main elements to be controlled in order to maintain an aesthetic balance and to keep performers as well as listeners involved and excited" (p. 28). Mintzer (McKenzie, 2006b) recommends a key change for variety. Gordon Goodwin (2006, p. 16) says of dynamics, "the music really takes on interest and movement." This statement is used as a tip in the project.

Purpose

"Always be aware of the genre in which you are writing" (Thomas, 2003). Broughton (McKenzie, 2006a) says, "I think if you start with the intent of 'I'm going to do this intellectually so the guys have a great time, I'm going to show what I know, I'm going to really challenge them', then you've missed the audience." Both these statements support that Purpose is a basic factor that is essential in the construction of a good arrangement.

Inspiration

A fifth basic factor (Inspiration) was included in the project. Gordon Goodwin (Child, n.d.) states that he will listen to a recording "and just let it wash over me, and that seems to trigger things -nothing specifically melodic, but the concept". Mintzer (McKenzie, 2006b) says that you should "Absorb sounds and ideas from playing in an ensemble for inspiration". The statement in the project that Arranging is like improvising in slow motion is validated by Gordon Goodwin (Wong, 2006) and

Broughton (McKenzie, 2006a), who agree that composing or arranging and improvising are linked. Thomas (2003) says, "Improvising should just be a speeded up process of composition".

Project Section 2.3 - Tune Selection

In selecting the right tune, Broughton (McKenzie, 2006a) suggests that the Broadway tunes, or the old standards, are best because of the diatonic harmony that should be learnt.

Project Section 2.4 - Sheetmusic, Fake Books, Real Books and Transcriptions.

Sheet music, Fake Books and Real Books are defined in the project. Nettles and Graf (1997, p. 178) define a lead sheet as "a score . . . showing only a composition's melody, its corresponding chords…and sometimes the lyrics." Wakker and Wakker (2001) describe this standard form of notation as a "melody line with chord symbols". Fake Books or Real Books are referred to in Wikipedia (*Fake book - Wikipedia, the free encyclopedia,* 2006*)* as "a collection of simplified sheet music". Bob Mintzer (McKenzie, 2006b) says that "fake books often contain wrong changes so it's best to source recordings". Russo (1961, p. 8) also says there can be mistakes or omissions.

Transcriptions

The Harvard Dictionary of Music (Randel, 2003, p. 58) describes how the terms Arrangement and Transcription are sometimes interchanged but Transcription implies greater fidelity to the original. "Transcribing means to write music down note for note" (Buttwinick, 1993). Clayton (2006) recommends transcribing a "handful of pieces" and determine the harmonic and orchestrational content. Then, arrange a piece based on the information gleaned from the transcription. He argues that this process expands the arranger's palate. Ed Wilson (McKenzie, 2008) "started by doing transcriptions". Broughton (McKenzie, 2006a) says that "transcribing is great for your ears. The more you do it, the better you get." This last source is cited in the project text as a tip.

Project Section 2.5 - Starting to Work

Learning at the Piano

Most good writers are also good players (and not necessarily pianists). Frank Mantooth (Goins, 2000, p. 40) likens playing and writing to Siamese twins. Bob Mintzer (McKenzie, 2006b) says, "Playing and writing go hand in hand. For example, developing motifs when playing is the same as when writing".

Learning some basic piano skills can be useful as Mintzer (Jarvis, 2004) explained, "You can sit at the piano with some manuscript paper and sketch out a skeletal tune with little snippets of ideas. Then it becomes a fluid process with a lot of changing, revision, and moving things around." Mintzer (McKenzie, 2006b) also offered some caution by saying, "If you write at the Piano, you are limited by your ability to play the piano . . . Try and hear things first". Emil Soderstrom (McKenzie, 2006a) said, "write away from the keyboard" but Broughton (McKenzie, 2006a) follows that statement up with "If you hear it and then you can't find it, go to the keyboard but have the discipline of getting your ears honed in to what it is". Wilson comments that he thinks about a tune for a while and then he'll go "to the piano and begin sketching some ideas" (McKenzie, 2008).

Sketching

Sketching is included in the project as many sources support its inclusion. Lowell and Pullig (2003, p. 25) say, "Begin by sketching your ideas in a condensed score of four staves or fewer". Bob Mintzer (McKenzie, 2006b) says to "sketch your scores first starting with the lead Trumpet if it has the melody . . . Start with the theme before writing the intro…Write a plan of the chart." Thomas (2003) also discusses sketching. Tommy Tycho, in an interview (Workman, 2001), states that he sets up a sketch or roadmap to every new arrangement and works through the chord progressions at the piano.

There is text box in the project text that has the question and answer: Q. How much time should I spend writing? A. How good a writer do you want to be? This is a

variation of Australian multi-instrumentalist James Morrison's saying (Webb, 2007, p. 5) "How much should I practise?. . . how good do you want to be?"

PROJECT CHAPTER 3 – BASIC ANALYSIS OF COMPOSITIONS

This chapter deals with basic analysis of compositions as an aid in fully understanding a composition before attempting to arrange it. In the survey conducted (Table 23), 66% of respondents agreed that basic analysis should be included in a text although only three of the fourteen published texts investigated included analysis (Table 37). "Analyze melodies and try to find out what makes them good" (Thomas, 2003). Musical analysis can be defined as a process attempting to answer the question "how does this music work?" (*Musical analysis - Wikipedia, the free encyclopedia, 2006*).

Project Section 3.1 - Melody

Eight of the fourteen published texts investigated (Table 37) include a chapter on melody. The following quotes offer an insight into the importance of melody:

Melody is defined in Encyclopædia Britannica as "the aesthetic product of a given succession of pitches" (Melody, 2008). "Melody is said to result where there are interacting patterns of changing events occurring in time" (DeLone, 1975, p. 270-1). "Melodies often consist of one or more musical phrases, motifs, and is usually repeated throughout a song or piece in various forms" (DeLone, 1975, p. 290-301). "A melody is more than an arbitrary string of notes and rhythmic values. Perception plays a part in determining intelligible melodies" (Solomon, 2002). Mintzer (McKenzie, 2006b) says that "Melody comes before harmony". Sacks (2007, p. 211) discusses how no one could remember the entire Beethoven's Fifth Symphony but the first four melody notes are memorable. An excellent example of melodic phrases can be found in "Stella by Starlight" (Young & Washington, 1944a) (used as example 1 in the project) and according to the music composer's biography (Wilson, 2007b), his date of death puts the composition in the public domain for Australia. Compositions in the public domain can be used in a published text without infringing copyright.

Project Section 3.2 - Cadences

The terminology and discussion used in this section of the project is supported by the following quotes: "The cadence is the most important harmonic formula in music . . . it appears mostly at the end of a musical section" (Nettles & Graf, 1997, p. 34). Bill Broughton (McKenzie, 2006a) says that students should know the tune "however they break it down in cadence or otherwise . . . then they'll know better what to do with it".

> In most Western and Western-influenced music (including jazz and 'world' musics), harmony is by far the most important signal of cadence…cadence, in tonal music, usually refers to the ending chord plus the chord or two immediately before it that led up to it. (Blood, 1999, p. 22)

Harmonic Cadences

Half cadence

Nettles and Graf (1997, p. 35) describe the cadence which rests temporarily on a dominant chord as a half cadence. Blood (1999, p. 22) equates an imperfect cadence and a half cadence and uses the II – V cadence as an example.

Full cadence

Nettles and Graf (1997, p. 34) describe the V7-I cadence as an "authentic cadence". Blood (1999, p. 22) equates a perfect cadence and a full cadence as "authentic" and uses the V – I cadence as an example.

Modal Cadence

Nettles and Graf (1997, p. 34) and Blood (1999, p. 22) describe the IV-I cadence as a plagal cadence. The song "Yesterday" (Lennon & McCartney, 1965) is cited in the project as an example.

Deceptive cadence

Nettles and Graf (1997, p. 35) describe a deceptive cadence occurring "when the resolution of a V chord is not the expected I chord" such as to VI or III. "Contemporary music also applies different nondiatonic deceptive progressions." They give the V7 - #IV-7b5 as an example. (p. 119) "Deceptive resolutions of dominant chords are very common methods used to achieve modulations. The multiplicity of dominant functions allows for modulation into any key" (p. 150). Blood (1999, p. 22) equates a deceptive cadence and an interrupted cadence and uses V- VI as an example.

Other cadences

Nettles and Graf (1997, p. 35) describe a Phrygian half cadence as a VI – V and cite *Chega De Suadade* as an example. Blood (1999, p. 22) describes a Phrygian cadence as a special type of half cadence that only occurs in minor keys such as IV6 – V. Also described is a Third-Relationship cadence. "Stella by Starlight" (Young & Washington, 1944a) was used in the project as an example of harmonic cadences.

Project Section 3.3 – Developers

The terminology and content used in this section is supported by Jim McNeely who uses fragments in his writing.

> Sometimes what I like to do [when I arrange] —and I do this in
> my own writing with my own tunes —is that some little phrase
> that goes by and you hardly notice it —it's in the middle of a line
> or something —all of a sudden, you latch onto that, and it
> becomes a key pivot point or a real strong structural device.
> (McNeely, as cited in Tafuri, n.d.)

Hammel (2002) describes melodic sequences as "a restatement of a motive at a different pitch level either up or down". "The sequence brings regularity and symmetry to the thematic development and is an aid for the beginner" (Mickey Baker, 1972, p. 15). "Upward modulations . . . force forward movement of the music" (Nettles & Graf, 1997, p. 147). "The Girl from Ipanema" (Jobim, DeMoraes, & Gimbel, 1962) is described by Chase (1987) as an example of a tune that uses many sequences and is used as example 7 in the project text. Britannica

Online (*Musical Form*, 2007) uses "O Come All Ye Faithful" (a composition in the public domain) as an example of sequences and Thomas (2003) uses the opening of "Autumn Leaves". "How Insensitive" (Jobim & DeMoraes, 1963) is used in the project as example 8 of the use of sequences. Allen (2000, p. 35) uses "Ode To Joy" (a composition in the public domain) to demonstrate Antecedent and Consequent phrases. "Stella By Starlight" (Young & Washington, 1944a) is used in the project as example 9.

Project Section 3.4 - Implied Harmony and Musical Tension

The concept of implied harmony is derived from Schenkerian analysis. The following statements support the definitions used in the text. Liverpool Hope University's Thomas Pankhurst states:

> At the heart of Schenker's theory of tonal music is a concept called prolongation. Prolongation explains how the melodic fragments that make up tonal music can be understood as prolonging harmonies through time… There are four main types of linear units that prolong harmonic units and these are known as diminutions. (Pankhurst, 2001)

Schenkerian analysis is not always applicable to popular music.

> So far, we have seen what Schenkerian analysts do when approaching popular music, but it is also interesting to see what they do not do. Some significant aspects of rock music are not emphasized by Schenkerian analyses because of their intrinsic limitations. (Garcia-Gallardo, 1999)

Implied harmony is expressed through:

Stepwise movement

> The simplest linear progression is the passing note, which is dissonant as it passes from one consonant note to another… The most important thing about linear progressions (as mentioned above) is that the first and last notes are both consonant with the harmonic goal of the progression. (Pankhurst, 2001)

An arpeggio

As Pankhurst (2001) suggests "The arpeggiation is perhaps the easiest diminution to spot. It prolongs a harmonic unit by arpeggiating (making into an arpeggio) the notes of the triad".

Appoggiaturas and escape notes

The terminology used in the project is supported by Pankhurst (2001) and Shannon (2000) who comment:

> The appoggiatura gained its name because of its shape: it leans on the following note. At first (early 17th century) it was thought of as a melodic decoration, but gradually an increasing importance was given to it as a source of harmonic enrichment". (Shannon, 2000)

> A consonant skip contains only notes from the harmonic unit that it is prolonging (in the case of C major, only C, E or G). It may leap from one note of the harmonic unit to any other - it is, in other words, an incomplete arpeggiation". (Pankhurst, 2001)

Any of the above

Pankhurst also suggests that "almost all tonal music can be understood as in terms of the four basic linear units discussed in this section and many figures that initially seem more complicated are often made up of a combination of one with another" (Pankhurst, 2001).

Project Section 3.5 – Melodic Character

The concept of active and static melodies is introduced in the project in this section.

"In Case You Missed It" (Watson, 1981) recorded by Art Blakey and the Jazz Messengers, used as example 16 in the project, is described by Goldsher (2002, p. 69) as a contemporary feeling tune with a "evil-sounding vamp and brightly swinging bridge" with a unison chorus that would have been "insanely difficult to play" at a slower tempo. Henderson (2007) describes the tune as "exuberant". It is certainly an active tune.

Pease and Pullig (2001, p. 28) refer to inactive (or static) melodies. "You Don't Know What Love Is" (De Paul & Raye, 1941) recorded by Art Blakey and the Jazz Messengers, used as example 17 in the project, is described as having a

> simple melody with constant harmonic rhythm . . . most of the rhythmical/melodic action is on the first and 4th beat of the measure. The second and third beat consist of long notes . . . an accompaniment consisting

of block chords, rather than arpeggios or a counter melody, would be most effective. (Wakker & Wakker, 2001)

It is therefore a static tune.

The tune "Black Orpheus" (Bonfa & Antonio, 1959) is included in the CD listening examples as a static tune in a colour unison. Rutherford (2000a, p. 15) uses "Dolphin Dance" (Hancock, 1965) as a piece for full analysis. It has been included in the project as an assignment.

Project Chapter 4 – Melodic Rhythm, Harmonic Analysis and Harmonic Colour

Chapter 4 of the project discusses an important component of melodic development being Melodic Rhythm. Harmonic Analysis and Harmonic Colour are also discussed**.** In the survey conducted, 54% of the respondents indicated that melodic development was an important constituent of an arranging text. Six of the published texts investigated include a chapter on melodic development (Table 37).

Project Section 4.1 – Adapting a Melody

This section provides a basic introduction to the sections that follow.

Project Section 4.2 – Key Selection

Key selection is one of the early steps in arranging. Bill Broughton (McKenzie, 2006a) will choose a key's colour before melodic range considerations. "Sharp keys are bright, flat keys are mellow". "Choose keys appropriate to the instruments" (Thomas, 2003).

"Have You Met Miss Jones" (Rodgers & Hart, 1937a) was used as an example (example 18) in the project for key selection. A tip is included in this section from John LaBarbera (2004) who says, "If the singer wants it in Ab, use the computer 'cause it will end up in G, A, Bb, or B".

Project Section 4.3 – Adjusting the Melodic Rhythm

The adjustment of melodic rhythm is an important step. Broughton (McKenzie, 2006a) says that "a really great melody has two fundamental things - rhythmic pattern and melodic pattern." He also argues that singing a tune will help develop a better sense of swing and phrasing. Pease and Pullig (2001, pp. 17-18) discuss rhythmic displacement of melody (anticipation or delay) to add interest.

"Just Friends" (Klenner & Lewis, 1931a) was used as example 19 for this section. The re-use of this tune in further examples in the project becomes apparent later in the text when a full arrangement containing several smaller examples is included. As the music composer's biography (Wilson, 2007a) states that he died in 1955, the tune is in the public domain in Australia.

Project Section 4.4 - Analyzing the Changes

In the survey conducted, 66% of respondents agreed that basic analysis should be included in a text although only three of the fourteen published texts investigated included analysis (Table 37).

Fundamental Bass and the Two-Part Structure

The terminology and concepts used in this section of the project are supported by the following sources:
"Schenkerian analysis . . . shows how various harmonies are prolonged by a two-voice contrapuntal structure (top line plus bass) that follows many of the rules of species counterpoint" (Pankhurst, 2001). Pankhurst (2001) describes how octaves, unisons, fifths and fourths are consonant (perfect) while sixths and thirds are consonant (imperfect) and seconds and sevenths are dissonant.

> Fundamental structure is the English equivalent for Schenker's word Ursatz. The Ursatz has two melodic lines in counterpoint with each other. The lower melody is a bass arpeggiation…The upper melody of the Ursatz is its fundamental line (what Schenker called the Urlinie). (Smith, 2003, p. 4)

"Have You Met Miss Jones" (Rodgers & Hart, 1937b) was used in the project as example 20 in the project.

Project Section 4.5 - Common Colouring Devices

Three of the fourteen published texts in Table 37 include a chapter on harmonic colour. Most jazz theory books, such as Levine (1995), refer to the common colouring devices such as extensions, suspensions, alterations and change of bass note. Cope (1993) discusses the use of 13th and diatonic planing in the work of Debussy which is referred to in the project. "Black Nile" (Shorter, 1964) was used in the project as an example of a tune that does not need more colour. "Stella by Starlight" (Young & Washington, 1944a) was used in the project as an in-class discussion (example 22 in the project) discussing the colouring devices used by Wayne Shorter in his recording of "Stella by Starlight" (Young & Washington, 1944b).

PROJECT CHAPTER 5 - REHARMONIZATION, CHORD SUBSTITUTION AND MELODIC DEVELOPMENT

This chapter of the project discuses reharmonization, chord substitution and melodic development. Within these main topics are discussions about keynotes, non-harmonic shapes, melody trimming, breathing, counterpoint, pedal point and contrapuntal bass lines.

Project Section 5.1 – Reharmonization and Chord Substitution

In the survey conducted, 64% of respondents agreed that reharmonization and chord substitution was an important constituent of a text. Fifty percent of the texts investigated in Table 37 also contained a chapter on this topic.

Chord Substitution

The definitions used in the project text are supported by the literature. "By substituting other chords with the same functional sound, it is possible to

reharmonize an existing passage" (Nettles & Graf, 1997, p. 39). "Jazz musicians have had a fondness for reharmonization . . . the melody must allow for any of these chord substitutions" (p. 117). Primary substitutions are defined by Felts (2002, pp. 7-9) who discusses how simple (primary) substitutions work. "One common substitution technique, borrowed from classical music, is to replace a I chord with a III chord . . . This substitution works because the chords have so many notes in common" (Sabatella, 2000). Harrison (1995, p. 63) refers to substitutes with plurality, or notes in common, as plural substitutes and states that the substitute chord will need to have "similar active/resting qualities" to the original chord.

Locating the Substitutes

Nettles and Graf (1997, p. 57) describe tritone substitutes for dominants which can be found in Schubert's Impromptu No.1 (Nettles & Graf, 1997, p. 61) and Mozart's KV 332 (Nettles & Graf, 1997, p. 62). Russo (1961, p. 15) states that tritone substitutions are "valuable only if the substitution will make the lead tone richer in relationship to the new chord". This statement supports the tip included in the project in this section. "Autumn Leaves" (Kozma & Mercer, 1945) was used as an illustration of simple colouring devices in the project as an in-class analysis (example 25 in the project).

Final Balance

In this section of the project it is stated that the chord changes must support the melody. Nettles and Graff (p. 117) state that **"**jazz musicians have had a fondness for reharmonization . . . the melody must allow for any of these chord substitutions".

Guidelines for using substitute chords

Nettles and Graf (1997, p. 95) refer to "Line clichés" that "create the impression of harmonic activity during an otherwise static chord". These are frequently found in minor keys chord progressions – usually a chromatic movement above the 5th

of the chord. Examples used are "My Funny Valentine" (minor) and "For Once in my Life" (major). Felts (2002, pp. 105-110) also refers to the "line cliché". Bill Broughton (McKenzie, 2006a) agrees that tunes can be over harmonized to the point that they become unrecognizable. Do not oversubstitute, "there is a point where if alteration becomes too extreme the original tune is lost" (Liebman, 1991, p. 113).

Project Section 5.2 – Keynotes

The concept of Keynotes, found in this section of the project, is also derived from Schenkerian Analysis in terms of the fundamental structure. Smith (2004) describes the fundamental structure:

> If you wish, you could think of the fundamental structure like the steel beams of a skyscraper to which the external facade is attached. Better yet, it is like our own bones upon which everything else (thankfully) hangs. Although one can't see the steel and bones, they are necessary for the structural integrity of everything else. (Smith, 2003, p. 4)

David Beach (Koozin, 1999, p. 2) studied Bach's French Suite No. 2, Menuet. This is an excellent example (example 26 in the project) of how keynotes are derived using Schenkerian Analysis. Nettles and Graf (1997, p. 178) use the term guide tones (essentially the same as keynotes) referring to the basic voice leading of the melody.

"Just Friends" (Klenner & Lewis, 1931a) is used as example 27 in the text for keynotes.

Project Section 5.3 – Melodic Development

In the survey conducted, 54% of respondents agreed that melodic development was an important constituent of a text. Six of the texts investigated in Table 37 also contained a chapter on this topic.

Adding Notes to the Melody – The Non-Harmonic Shapes Most Common To Jazz

This section of the project introduces non-harmonic shapes in music. Shannon (2000) describes how appoggiaturas were first used in the early 17th century. Blood (1999, p. 25) describes four Non-Harmonic notes (Table 38). Pease and Pullig (2001, p. 19) discuss approach notes using passing tone and auxiliary (neighbour) tone patterns. The appoggiatura shape is referred to as an "unprepared approach note".

Table 38 – Non- Harmonic notes

Non-Harmonic, Non-Chord, Non-Chordal or Non-Essential Notes			
classification	symbol	type	description
passing notes passing tones (US)	p	melodic	notes that pass by a tone (step) or semitone (half-step) between chord notes.
neighbouring notes neighboring tones (US)	n	melodic	notes that leave and return to the same chord note by a tone (step) or semitone (half-step).
appoggiatura	a	melodic	a note that is approached by leap, but resolves to a chord note by a tone (step) or semitone (half-step) - the resolution often in the opposite direction to the leap.
escape note	e	melodic	the opposite of an appoggiatura, being approached by a tone (step) or semitone (half-step) and resolving to a chord note by a leap.

Source: Blood (1999, p. 25)

The 1st level of adding notes is embellishment of the melody. Lowell and Pullig (2003, p. 9) devote a page to special effects for wind instruments including the shake, fall, gliss and turn. The 2nd level is adding notes to the keynote structure. "Just Friends" (Klenner & Lewis, 1931a) is used for examples to 28 to 34 in the project. The 3rd level of development is described as being compositional. This relates back to earlier definitions of arranging. "You Don't Know What Love Is" (De Paul & Raye, 1941), recorded by Art Blakey and the Jazz Messengers, is used as example 35 in the project.

Project Section 5.4 – Trimming the Melody, Breathing, Counterpoint and Pedal Point

"Just Friends" (Klenner & Lewis, 1931a) is used for example 36 in the project text as an example of shortening sustained notes and as examples 38 and 39 as

examples of a melody breathing. Frank Mantooth's arrangement of Secret Love (Fain & Webster, 1953) is used in the project as example 37 demonstrating melodic trimming.

Contrapuntal Lines (Counterpoint)

Eight of the fourteen published texts investigated (Table 37) include a chapter on counterpoint. Lowell and Pullig (2003, p. 43) discuss counterpoint and the importance of well constructed secondary lines. "My Funny Valentine" (Rodgers & Hart, 1937c) was used as examples 40 and 41 in the project, demonstrating how to apply good and faulty counterpoint.

Contrapuntal Bass Lines

Russo (1961, p. 43) shows how the bass can have a "more direct melodic function" and can "outline parts played by…bass trombone, baritone sax". Example 42 used in the project is from the score of "Still Workin' It" (McKenzie, 2007b) and the recording of "Still Workin' It" (McKenzie, 2007c).

Pedal Point

The discussion in the project about pedal point can be justified by the following sources:

Frank Mantooth (Goins, 2000, p. 40) loves "playing tunes with lots of changes over a pedal tonic or dominant". In reference to the pedal dominant in his arrangement of "I Only Have Eyes For You", he states, "My assumption was that the melody was so strong, I could do virtually anything underneath harmonically" (p. 41). "Constant structure fourths sound great over a pedal point (Pease & Pullig, 2001, p. 79). "Pedal point is not a vertical, but a linear consideration" (Nettles & Graf, 1997, p. 142). Further reading reveals that pedal points can be in the bass (tonic or dominant), inner harmonies or above the harmonies (p. 142).

> An interesting type of harmonic tension can be achieved by keeping the bass note constant while allowing the chords to change above. This technique is called pedal point, a term inherited from its use on pipe organs...can have the effect of establishing a sense of tonality where one did not exist before, as chords that otherwise held no

obvious relationship to each become more like harmonic decoration of the pedal note. (Sabatella, 2000)

Project Section 5.5 –   Harmony-2 (Reharmonization) - Levels Of Colour - Adding Chords

This section of the project is a further extension of earlier sections of this chapter. An in-class discussion is included using Art Blakey's recording of Skylark (Carmichael & Mercer, 1942a) (example 45 in the project text) in applying a pedal point and is used as an example of using chord substitutions and target chords.

Project Section 5.6 –   Adding Chords to the Changes

This section of the project discusses the levels of development in adding chords to existing chord changes and the term "Harmonic Rhythm" is used. Nettles and Graf (1997, p. 48) describe "Harmonic Rhythm" as "the rate of harmonic change". "A faster tempo calls for a slower harmonic rhythm" (Felts, 2002, p. 108). Increasing the harmonic motion or rhythm, can be by 1st level development. Nettles and Graf (1997, pp. 67-72) state that "any dominant chord may be preceded by its related II-7" and therefore justifying 1st level development. "Have You Met Miss Jones" (Rodgers & Hart, 1937b) is used as example 46 in the project. 2nd level development is by way of the same harmonic shapes discussed in project section 5.3. Lowell and Pullig (2003, p. 11) discuss the diatonic scale approach.

"Have You Met Miss Jones" (Rodgers & Hart, 1937b) is used as examples 47 and 48 in the project. "Beautiful Love" (Young, 1931) was used as example 49 in the project text as a tune that could be reharmonized by adding non-harmonic notes in the fundamental bass. According to the music composer's biography (Wilson, 2007b), Young's date of death puts the composition in the public domain for Australia. Other examples provided were "Black Orpheus" (Bonfa & Antonio, 1959) (example 50 in the project) and "Yesterdays" (Harbach & Kern, 1933) (example 51 in the project text), the latter being in the public domain according to

the year of death (1945) cited in Jerome Kern's biography (Burlingame, 2007). Example 54 in the project is Cedar Walton's reharmonization of "All the Way" (Van Huesen, 1957). Examples 55, 56 and 57 in the project are reharmonizations of "Stella by Starlight" (Young & Washington, 1944a) included as an in-class discussion.

The chord substitution exercise, included in the project as an in-class discussion, demonstrates two principles. Firstly, how a melody note can be harmonized by any bass note and secondly, how a tonic chord arrival (cadence) can be delayed. The term "Coltrane Substitution" is used in the project.

> Coltrane Changes, [are] sometimes called Giant Steps Changes… Coltrane did not originate the progression, but he popularized it. The primary characteristic of the Coltrane changes is that the tonal centers modulate by major thirds… You can use this cycle to add interest to a progression that is more static. For example, you can use it when you have several measures of a I chord. (Sabatella, 2000)

Berg (1998, p. 122) discusses many substitute harmonic idioms including the Coltrane turnback.

Project Section 5.8 - Reharmonizing a I chord when the melody is the tonic

Mark Levine (1995) dedicates a chapter to advanced reharmonization including this particular issue. Examples 58 - 63 used in the project are "Surrey with a Fringe on Top" (Rodgers & Hammerstein, 1943), "On the Sunny Side of the Street" (McHugh & Fields, 1930), "My Foolish Heart" (Young, 1949), "Have You Met Miss Jones" (Rodgers & Hart, 1937b), "Stella by Starlight" (Young & Washington, 1944a) and "All the Things You Are" (Kern, 1939).

PROJECT CHAPTER 6 – SCORING FOR THE RHYTHM SECTION

This chapter deals directly with methods of scoring (or orchestrating) parts for the rhythm section. Eighty three percent of lecturers surveyed (Table 23) agreed that rhythm section scoring was an important constituent of a text book. Eleven of

fourteen text books investigated (Table 37) included a chapter on rhythm section scoring. The make-up of a rhythm section in a jazz ensemble (stated in the project) and the concepts introduced are supported by the following sources:

"The conventional rhythm section is piano (or electric piano), bass (or bass guitar), kit percussion, rhythm guitar" (Brown, 2006). The horns traditionally dominate the big band, however, Lowell and Pullig (2003) mention that the rhythm section has several roles:

> It is important to remember, however, that a successful arrangement also needs detailed and clear parts for the rhythm section players. A good arranger will facilitate their supportive comping role and occasionally make use of their orchestral potential, both in the doubling of horn lines and as a separate unit to contrast the horn section. (Lowell & Pullig, 2003, p. vi)

Bob Mintzer (McKenzie, 2006b) says, "Always allow for self expression in your rhythm section parts . . . don't be overly instructive . . . Give the rhythm section an indication of what the ensemble is doing." Steve Sedergeen said in a workshop (Sedergreen, personal communication, January 24, 2008) that rhythm section parts are only a guide except where something specific is required such as a figure that matches the horn section.

Project Section 6.1 – The Piano

In this section of the project text, the piano and synthesizer are discussed. In relation to piano parts, Mintzer (McKenzie, 2006b) says, "don't use too many voicings in your piano parts". Thomas (2003) discusses how piano parts can just be chord symbols, can cue the bass line and include cues. Levinson (2005, p. 93) explains how George Shearing described his sound, being influenced by Glenn Miller, as a voicing using piano with vibes and guitar. This sound is mentioned in the project.

Also discussed is the use of synthesizers. The example cited in the project text of how synthesizers can replace other keyboards was "Angels We Have Heard On High" arranged by Carmichael (1961) where the celeste part could be played on synthesizer. Bruce Broughton (Schelle, 1999) says that his synth mock-ups (for

movies) do not transfer the emotion of the music he has written. "I have a lot of problems with directors not being able to feel the emotion because they can't feel the synths."

Project Section 6.2 – The Guitar

The discussion in the project about guitar parts is supported by Hill (2001, p. 60) who states that "guitar players find 'chopping wood' exciting, but when it is done well, the band has an irresistible pulse". Thomas (2003) discusses how guitar parts are usually just chord symbols and also discussed in the use of effects and other tonal considerations.

Project Section 6.3 – The Bass

The discussion in the project about bass parts is supported by Broughton (McKenzie, 2006a) who says, "even on my big band charts, all the charts I write, no matter what they are, I'll write my bass line. The bass player can do better; he's got my permission." He also gives the chord symbols. Russo (1961, p. 41) illustrates methods of writing bass parts and the use of Arco which is "better when the tempo is slow". Thomas (2003) discusses how bass parts should include both chord symbols and a written line and the differences between a 2 feel and a 4 feel.

Project Section 6.4 – The Drums (Drum Kit)

The discussion in the project about bass parts is supported by Thomas (2003) who says, "drum parts cause more problems than other rhythm section parts". Thomas discusses how notating stabs, including a tempo mark and style indications, are important. Also, how a rhythmic pattern can be written and then "allow the drummer freedom to choose or experiment". "The drum part today is a guide for the player" (Russo, 1961, p. 37). Hill (2001, p. 60) states that "drum parts are often poorly written . . . it helps to write the lead trumpet rhythms on

the drum chart". The following quote of Bill Broughton is used in part in the project as a tip.

> I write a map and say, "have fun". I expect that drummer knows that he has to be the best listener in the band - he needs to know all the parts. I write pops or hits or certain things you want say . . . "Here's hi hat". If I need a crash I'll put it in. (Broughton, as cited in McKenzie, 2006a)

> I try to put as few notes as possible in the drum chart. Ideally I want the drummer to listen to the chart rather than read it. Sometimes a few words of explanation are better than a lot of notes. I do cue a lot of the front line phrasing on the drum part. (Wilson, as cited in McKenzie, 2008)

Mintzer (McKenzie, 2006b) says that for drum parts, "slashes keeps the groove going, indicate who is playing at the time (e.g., trombones) and only notate the essential hits. Typically write two bars of a groove at the start (and at a change of feel) to give an indication." Russo (1961, p. 37) discusses sticks, mallets and brushes. The book *Guide to Standardized Drumset Notation* (Weinberg, 1998) deals with all aspects of drum notation and historical conventions and is used in the project as a reference for further study.

Project Section 6.5 – Percussion

Five texts investigated (Table 37) include a chapter on scoring for percussion instruments. Hill (2001, p. 60) says that most latin percussion instruments are good for use in large ensembles and also the vibraphone, however, "auxiliary percussionists should avoid stepping on other parts." Broughton (McKenzie, 2006a) says, "I think congas are great as long as they're enhancing . . . I think uses of vibes, xylophone, and marimba would be great to have different colors". To save doubling money in recording sessions, percussion is grouped "into four categories where you have kit, timpani, mallets and toys". Hagedorn (2007, p. 9) says that "auxiliary percussion instruments add much to the timbre of an ensemble and authenticity and character of specific musical styles". Gordon Goodwin (2006, p. 10) says, "latin music requires precise rhythmic interpretation". Ed Wilson states

that "the cowbell, tambourine, shaker all add colour to particular arrangements and should not be overlooked. Congas do help swing charts" (McKenzie, 2008).

Project Section 6.6 – Composite Rhythm Section Parts

In this section of the project, the composite rhythm section part is discussed. While normally used in small ensemble writing, the cited example (in the project) of a composite rhythm section part in a big band is "It Came Upon a Midnight Clear" arranged by Anderson (2002). The project example 64, of a typical composite rhythm section part, is "Stella By Starlight" (Young & Washington, 1944a).

PROJECT CHAPTER 7 – ARRANGING FOR THE SMALL ENSEMBLE

This chapter discusses small ensemble arranging. Eighty six percent of survey respondents (Table 23) agreed that small ensemble arranging should be included in a text. Eight of fourteen texts investigated (Table 37) include a chapter on small ensemble arranging.

Project Section 7.1 – Form

Various aspects relating to form of an arrangement are discussed in this section of the project. Lowell and Pullig (2003, p. 29) discuss the elements of form including introductions, interludes and endings. Thomas (2003) also discusses form.

The suggestion in the project to use rehearsal letters is supported by Lowell and Pullig (2003, p. 26) who encourage the use of rehearsal letters. They state that key signatures should be placed on every part except for complex chromatic pieces written in "open key" (p. 27).

The further listening example cited in the project is Slide Hampton's "Day In Vienna" (Hampton, 1980) for its classic small band arrangement form.

Introductions

Further listening examples cited in the project for investigating types of introductions were "Tip Toe" (Jones, 1963b) for not having an introduction, Buddy Rich's recording of "Love for Sale" (Porter, 1930) for having a drum only introduction, Count Basie's recording of "Splanky" (Hefti, 1958) for a piano introduction, Buddy Rich's recording of "Groovin' Hard" (Menza, 1970) and Count Basie's recording of "Told You So" (Holman, 1976) for the reuse of material in the introduction.

Solos

The discussion in the project text about instrumental solos is supported by a series of writers: "My first rule became: The first solo only happens when absolutely nothing else can happen…You don't write in a solo until you've completely exhausted what you have to say" (Brookmeyer cited in:Ratliff, 2006, p. 3). This quote is used in the project text. Brookmeyer (Garelick, 2004) also said, "There should only be a solo when the only thing that can happen is a solo". Mintzer (McKenzie, 2006b) likes to have something between solos suh as a trombone soli or a section with no rhythm section.

Further listening examples cited in the project are Kenton's recording of "Theme and Variations" (Holman, 1953) as an example of a chart with no solos and "Three and One" (Jones, 1970b) as an example of a chart where the melodic instruments from the head become the soloists.

Background Figures

The discussion of backgrounds to solo sections in the project is supported by Lowell and Pullig (2003, pp. 139-148), who devote a chapter to background writing using riffs, guide tone lines and a compositional approach. They say to write sparsely, not use backgrounds for an entire solo, that backgrounds are more effective towards the end of a solo, and to use instruments of a different colour than the soloist. Jim McNeely (Tafuri, n.d.) says that "the solo becomes one element of that overall texture, then the background material starts to come in and lift the soloist".

> While you cannot respond to the ideas and directions of the soloist, you can create a background that provides inspiration to the soloist. Allow the soloist to respond to the arrangement rather than vice versa…The background parts can help establish the overall direction for the performance. If the background parts contain a lot of energy, the solo will have to match that…Conversely, if the background parts are subdued, the solo will probably follow suit as well. (Sabatella, 2000)

The further listening example listed in the project is Rob McConnell's arrangement of "Just Friends" (Klenner & Lewis, 1931b). It was used as an example of an arrangement with background figures that develop well.

Solis

The discussion of solis (plural of solo) in the project text is supported by Lowell and Pullig (2003, p. 131) who discuss soli writing, describing this writing as an "arranger's solo" by constructing (composing) a melodic line that emulates an improvised solo and then voicing it for a section of the band. The most common is the sax soli.

Further listening examples listed in the project are Thad Jones – Mel Lewis Jazz Orchestra's recording of "Groove Merchant" (Richardson, 1967), used for its extended saxophone soli, Supersax's recording of "Just Friends" (Klenner & Lewis, 1931c), for its harmonization of Charlie Parker's solo, "Slo Funk" (Mintzer, 1980), for its trombone and bass soli and "Count Bubba's Revenge" (Goodwin, 2004) for its solis appearing in each section of the band.

Shout Choruses

The discussion of shout choruses in the project is supported by Lowell and Pullig (2003, pp. 149-155) who include a chapter about shout chorus writing, detailing the characteristics and some recommended listening. Bristol (1998) refers to the shout chorus as:

> the pinnacle of the big band chart. Similar to the development section in Sonata Allegro form. This is where the writer can exhibit

his skills, creating something new and different within the arrangement. This is the most exciting part of the chart. (Bristol, 1998)

Endings

Further listening examples of endings, listed in the project, are Bob Brookmeyer's arrangement of "Skylark" (Carmichael & Mercer, 1942b) for its small but tense ending and Buddy Rich's recording of "Groovin' Hard" (Menza, 1970) for its big finish.

Project Section 7.2 - Voicings in General

This section of the project text is a general discussion of voicings. Eighty six percent of respondents to the survey (Table 23) agree that voicing styles are an important constituent of a text. Nettles and Graf (1997, p. 181) define voicing as "the actual position, or order of a chord's pitches". Solomon (20020 also says, "Voice leading is here defined as the motion of a single voice requiring step progression".

In discussing which notes to leave out of a voicing, Mintzer (McKenzie, 2006b) says that "using a 5th in a voicing is bland". Nettles and Graf (1997, p. 174) say that the 5th is the least important note. Russo (1961, p. 18) states that "leaving out the fifth disturbs the quality of the chord least". "The bass player is paid to play the root note" (Nettles & Graf, 1997, p. 174). Russo (1961, p. 18) states that the third or minor seventh should never be omitted.

Basic Voice Leading Rules

In discussing voice leading rules, the statement that classical rules are often overlooked in jazz arranging is supported by Nettles and Graf (1997, p. 176), who say that traditional voicing theory such as voice leading and parallel motion are not always observed in contemporary jazz harmony. Mickey Baker (1972, p. 61) also discusses how traditional theory is allowed more freedom in jazz writing.

Rules 1 to 7 used in the project were also found in the Russo (1961, pp. 18-28) text. "The inner voices, as well as the bass and melody tones should sound interesting and convey as closely possible, sub-melodies on their own" (Liebman, 1991, p. 32).

Project Section 7.3 – Non-Chordal Tones

The terminology used in this section of the project about non-chordal tones can be justified by the following sources:

Nettles and Graf (1997, p. 174) state in relation to passing tones that "it is also possible to view any diatonic note from the chord scale as a melodic approach note so long as it resolves to an available chord tone or tension". Passing tones, neighbouring tones and auxiliary tones are discussed by Russo (1961, p. 29). Nettles and Graf (1997, p. 177) say that blue notes are the minor 3rd, minor 7th and flat 5 in a major tonality. Blue notes are discussed by Russo (1961, p. 30) .

Project Section 7.4 – Voicing Horns

Eleven of the fourteen published texts investigated (Table 37) include a chapter on close and open position voicing styles. In this section of the project dealing with voicing horns, the chord voicing terminology discussed can be verified by the following sources:

Lowell and Pullig (2003, p. 8) describe how the intervals of a second should not be used below the note F (below middle C) and that any note forming an interval above the root note (other than unison) should not be a note lower than a D (below middle C). Pease and Pullig (2001, pp. viii,94) also concur. Nettles and Graf (1997, p. 181) define a close position voicing as a voicing within one octave. Russo (1961, p. 13) states that "close position voicings give sweep and flow". Nettles and Graf (1997, p. 181) define an open position voicing as a voicing that exceeds one octave. Russo (1961, p. 13) states that "open position voicings are anchored and full". Nettles and Graf (1997, p. 177) say that the term cluster refers to "three or more pitches in secundal relationship played simultaneously", and that Henry Cowell coined the term. "Clusters are voicings in which the prevailing interval between

adjacent notes is a second" (Pease & Pullig, 2001, p. 93). "Clusters voicings are very dense and dissonant"(Lowell & Pullig, 2003, p. 95). Pease and Pullig (2001, pp. 93-102) devote a chapter to this subject.

Project Section 7.5 – Harmonic Density

Fifty percent of published texts investigated (Table 37) include a chapter about harmonic density. Prater (2004) defines harmonic density:

> A chord can have many notes, but maybe only a few different pitch classes represented in those notes. The total number of different pitch classes represented in a chord is the chord's harmonic density. The more different pitch classes represented, the more dense the chord. (Prater, 2004)

The composers referred to in the project as exponents of the pan-chromatic chord were Lazarof (Cope, 1988), Takemitsu (Burt, 2001, p. 107), Persichetti (Persichetti, 1953) and Brookmeyer.

Density of One

Density of One is defined in the project as unison or octaves. Lowell and Pullig (2003, pp. 33-37) discuss how unisons or octaves give dramatic contrast to denser voicings and demonstrate how the timbre of instruments chosen can effect the sound through audio examples. Gordon Goodwin (2006, p. 10) says, "When you play that melody at measure 9, you are recreating one of the classic sounds in jazz: the tenor sax and trombone in unison. Man, I never tire of that sound!" This quote is used directly in the text of the project.

Density of Two

Example 75 in the project text of density two writing is "Devil's Island" (Shorter, 1962).

Density of Three

Example 76 in the project text, used as an example of close position density three voicing, is "King Cobra" (Hancock, 1963) . Example 77 in the project text, used as a close position density three example using minor seconds, is "Day In Vienna"

(Hampton, 1980). Example 78 in the project, used as an example of quartal chords, is the Art Blakey and the Jazz Messengers' recording of "You Don't Know What Love Is" (De Paul & Raye, 1941). Example 79 in the project, used as an open position density three example, is "King Cobra" (Hancock, 1963) . The term "Quartal chord" is used in the project - Berg (1998, p. 139) explains the concepts of quartal jazz.

Density of Four

Root position, pyramid shaped voicings are illustrated in the project example 80a. Pease and Pullig (2001, p. 28) describe root position density 5 chords as "five-part spreads" that can be used for inactive melodies. Nettles and Graf (1997, p. 176) say that for root position spreads, "the larger adjacent intervals are reserved for the lower areas; smaller adjacent intervals are higher. Pease and Pullig (2001, p. 24) describe a 5 instrument voicing as four–way if the melody is doubled an octave lower. The principal of doubling the melody is illustrated in the project examples 80c and 80d. Bill Broughton (McKenzie, 2006a) says, "It can never hurt to double the melody."

Density of Five

The discussion of density five voicings in the project are left for the following project chapter. Pease and Pullig (2001, p. 32) describe "five-note soli voicings" as having a richer sound than density 4.

The in-class discussion examples (81 & 82) used in the project are "Nutville" (Silver, 1965) and "Miss Bessie's Cookin'" (Rich & Wilkins, 1960).

Project Section 7.6 – Harmonization of Non-Chordal tones

Example 83 in the project, "Three and One" (Jones, 1970a), illustrates several methods of harmonizing non-chordal tones using linear approaches. Lowell and Pullig (2003, pp. 105-115) devote a chapter to line writing where the vertical aspect of the voicings are secondary to good melodic motion in the inner parts. Target points are selected where chord based voicings are used and in between, more ambiguous, nonfunctional harmony results.

The term "Passing diminished chord" is used in the project in discussing project example 83. Nettles and Graf (1997, p. 110) support this terminology by stating, "The first appearance of the diminished chord traces back to the 16th century". Nettles and Graf (pp. 117-118) discuss the reharmonization of diminished chords to give a "more active and more interesting harmony". In the project text, it is stated that repeated notes should be avoided. Lowell and Pullig (2003, pp. 57) discuss strategies to avoid repeated notes, stating that repeated notes make lines less fluid and less melodically pleasant.

Half-Step Planing or Parallelism

The terminology used in this section of the project text is supported by writers such as Frank Mantooth (Goins, 2000, p. 41) who states that he "still gets a thrill out of parallel planing". Lowell and Pullig (2003, p. 11) and Pease and Pullig (2001, p. 20) refer to parallel planing as "Chromatic Approach". Nettles and Graf (1997, p. 179) use the term "Side Slipping" for harmonic or melodic chromatic approaches. Example 84 in the project is McCoy Tyner's reharmonization of "Lush Life" (Strayhorn, 1949).

Project Section 7.7 – Further Methods of Reharmonization

More concepts about reharmonization are discussed in the project leading to an in-class discussion. Example 85 in the project is an example of increasing the harmonic motion of a chord progression. The in-class discussion provided (example 86) is a short full score of an arrangement of "Just Friends" (Klenner & Lewis, 1931a) which incorporates many of the previous examples used in the project.

PROJECT CHAPTER 8 – BIG BAND ARRANGING – THE SECTIONS

This chapter of the project discusses big band arranging. The survey revealed that 71% of respondents agreed that big band arranging is an important constituent in a text (Table 23).

It is assumed that earlier chapters involving small band arranging have been covered. Bob Mintzer (Jarvis, 2004) said, "I approach big band writing as if it were a small group". He also says that his experience playing in various big bands has influenced his writing skills immensely. Lowell and Pullig (2003) discuss how a working knowledge of small ensemble techniques is "a prerequisite for grasping the arranging methods for large ensembles" (p.vii).

The actual name for a big band has many differing opinions and is addressed in the project as a tip. Art Dedrick (Nestico, 2002) said (in reference to some school band arrangements that were to be published), "We'll publish this music, but since jazz doesn't have a good name, we'll call it 'stage band'". The University of North Texas call their bands "lab bands" (N. Slater, 2007). The Victoria Police call their band a "Showband" (*Victoria Police Showband*, 2007).

> A band which has a more commercial aim, maybe playing for dancing or providing accompaniment for a singer, could be described as a big band. An ensemble that features an appreciable amount of improvisation could be described as a jazz orchestra. (Brown, 2006)

"Ask questions" is an important tip from Bill Broughton (McKenzie, 2006a) who says that one should always ask questions of players around them to find out how to write effectively for those instruments. He also says that it is essential that they receive a chance to hear their work played by real musicians.

Project Section 8.1 – Saxophones

The survey revealed that 78% of respondents agreed that woodwind scoring methods are an important constituent in a text (Table 23). Ten of the fourteen published texts investigated (Table 37) included a chapter on saxophone voicings. Numerous sources support a discussion of the various saxophones and woodwinds. One such discussion is Brown (2006) who says, "Saxophones are usually two Eb alto saxophones and two Bb tenor saxophones, with one Eb baritone saxophone . . . To these seventeen players may be added . . . assorted upper woodwind (piccolo, flutes, clarinets)". The cited example in the project text of a published arrangement using bass saxophone is "Malaguena" arranged by Bill Holman (1961).

In discussing woodwind doubles, Bob Mintzer (Jarvis, 2004) says that "to play in a big band, you need to be proficient on flute and clarinet." Lowell and Pullig (2003, pp. 117,118) discuss woodwind doubling. They state that altos play flutes, tenors play clarinets and baritone plays bass clarinet. "Oboe and bassoon are rarely used" (Brown, 2006).

The example of oboe and cor anglais quoted in the project is from the Album "Aura" (Davis, 1985).

The further listening examples in the project are "Waltz of the Prophets" (Barton, 1961a), the video also found on YouTube of "Waltz of the Prophets" (Barton, 1961b), Bob Florence's arrangement of "Poinciana" (Bernier & Simon, 1952), used as an example of woodwind doubling and "Exotic Flower" (Ra, 1966), as an example of an oboe solo. The bassoon solo on Mingus' arrangement of "Wolverine Blues" (Morton, Spikes, & Spikes, 1923b) can also be viewed online (Morton, Spikes, & Spikes, 1923a). The last further listening example is the cor anglais solo on "The Door" by Bob Brookmeyer (2006).

Common Voicings for the Sax Section

The previous section revealed the importance of discussing sax voicings. Examples 87 and 88 used in the project are the score of "Upon a Rock" (Davidson, 2004a) and the recording of "Upon a Rock" (Davidson, 2004b) – both of which use unison and duet voicings.

Saxes and Higher Densities

Various higher density sax voicings styles were discussed in this section as density 4 and 5 vocings can be handled in a variety of styles such as block (or closed), drop two and open position.

Block Voicings

Example 89 in the project is the score of "Hola" (Turcio, 2005a) and the associated

recording of "Hola" (Turcio, 2005b).

Drop Two

Nine of fourteen published texts investigated (Table 37) included a chapter on drop two voicings. Pease and Pullig (2001, p. 24) and Nettles and Graf (1997, p. 174) describe drop 2, density 4 voicings as well as Drop 2+4 and the less common drop 3. Example 90 in the project is the score of "Still Workin' It" (McKenzie, 2007b) and the associated recording of "Still Workin' It" (McKenzie, 2007c).

Within this section of the project, voicings using fourths are mentioned. Pease and Pullig (2001, pp. 70-83) support this inclusion as they include a chapter on this topic. "Jazz musicians of all persuasions have embraced the more modern and sophisticated sound possibilities that come from voicings in fourth" (Pease & Pullig, 2001, p. iv). Voicing in fourths sound "resonant and mildly dissonant" (Lowell & Pullig, 2003, p. 73).

Open Voicing

Density five and cluster voicings for saxophones are discussed in this section of the project text. Example 91 used in the project, as an example of inversion position density five sax scoring, is the score of "Hola" (Turcio, 2005a) and the associated recording of "Hola" (Turcio, 2005b). Example 92 used in the project text, as an example of root position density five sax scoring, is the score of "Clouds on Blue" (Davidson, 2007a) and the associated recording of "Clouds on Blue" (Davidson, 2007b). Example 93 used in the project text, as an example of cluster position density five sax scoring, is the score of "Legacy" (G. Slater, 2007a) and the associated recording of "Legacy" (G. Slater, 2007b). The in-class discussion in the project text examines an excerpt of the score of "Three and One" (Jones, 1970a) (examples 94 to 98 in the project) and uses the associated recording of "Three and One" (Jones, 1970b). Malcolm Baker (1993) discusses Thad Jones' voicings for saxes. Eight of the fourteen published texts investigated (Table 37) included a chapter involving cluster voicings, thus justifying the inclusion of this topic in the project.

Routine – Scoring Moving Saxes with Block and Drop-2 Voicings

This section of the project demonstrates a scoring routine for saxophones (examples 99 to 103 in the project). Part four of this routine introduces the concept of compatible chords or chord scales. Lowell and Pullig (2003, p. 15) describe "a chord scale as a set of stepwise pitches related to a chord symbol that provides a supply of notes compatible with that chord symbol's sound and its tonal or modal function".

The in-class discussion examines the voicings used by Supersax. Example 104 in the project is a transcription of Charlie Parker's solo on "Donna Lee" (Parker, 1947) and reference has been made to a YouTube video of Supersax playing "Just Friends" (Klenner & Lewis, 1931d). The accompanying audio CD includes "Donna Lee" played in the style of Supersax. An exercise for sax voicings has been included which could be done in class or as extra work.

Project Section 8.2 – Arranging for the Brass Section

This section of the project discusses the basics of brass scoring. The survey revealed that 80% of respondents agreed that brass scoring methods are an important constituent in a text (Table 23). Eleven of fourteen published texts investigated (Table 37) included a chapter on brass voicings.

The consituents of a brass section listed in the project are supported by Brown (2006) who states that "the brass is comprised of four Bb trumpets and four trombones (three tenors, one bass) . . . To these seventeen players may be added more brass (a fifth trumpet and fifth trombone are common), and maybe a couple of french horns". Bob Mintzer (McKenzie, 2006b) says, "Using five trumpets in a section allows more interesting textures such as clusters but I'm happy with just four."

Project Section 8.3 – Trombone Section Voicings

Trombone voicings are specifically discussed in this section of the project. Bill Broughton (McKenzie, 2006a) says that some students voice the trombones too

low in fear of using too many ledger lines but then sometimes "they use them as third trumpets and voice them too high". Bob Mintzer (McKenzie, 2006b) says "build a solid foundation in the trombones".

Choosing the Right Voicing

Various voicing styles are discussed in the project text with associated examples. The low range melody Example 106 used in the project is the score of "Dialmentia" (T. Davies, 2003a) and the recording of "Dialmentia" (T. Davies, 2003b). The close position example 107 used in the project is the score of "Still Workin' It" (McKenzie, 2007b) and the recording of "Still Workin' It" (McKenzie, 2007c). The open position example 108 used in the project is the score of "Hola" (Turcio, 2005a) and the recording of "Hola" (Turcio, 2005b). The inversion voicing example 109 used in the project is the score of "Clouds on Blue" (Davidson, 2007a) and the recording of "Clouds on Blue" (Davidson, 2007b).

Analysing a Melody Line for Voicings

Examples 110 to 113 used in the project demonstrate various ways to voice a phrase for trombones depending on the context. Further listening examples used in the project are "My Favourite Things" (Rogers & Hammerstein, 1959) arranged by Matt Niess (skilful writing for five trombones) and "A Night in Tunisia" (Gillespie, 1942b) recorded by Jay and Kai Trombone Octet (writing for two choirs of 4 trombones and utilizing varying voicing styles). An exercise for trombone voicings has been included which could be done in class or as extra work.

Project Section 8.4 – The Trumpet Section

Trumpet voicings are specifically discussed in this section of the project. Broughton (McKenzie, 2006a) says, " I usually don't take the Trumpet past a D. I'll put an optional note in there – I know their egos are big so if I put a parenthesis G, he'll go

for it". He also confirms that the upper high register should be reserved for specialists.

Voicing Trumpets

Three types of voicing styles for trumpets are discussed in the project. Further listening examples used in the project are the Buddy Rich recording of "Party Time" (Mintzer, 1988) and the Mike Vax recording of "Night in Tunisia" (Gillespie, 1942a). Examples 114 and 115 used in the project of trumpet voicings are the score of "Still Workin' It" (McKenzie, 2007b) and the recording of "Still Workin' It" (McKenzie, 2007c).

PROJECT CHAPTER 9 – THE BRASS SECTION AND COMBINING SAXES

This chapter of the project discusses the voicing of the brass section (i.e., the trumpets with the trombones) and the brass section in combination with the saxes. The chapter discusses how the saxes are treated differently in this situation compared to being voiced as a stand alone section.

Project Section 9.1 – Voicing the Brass Section - Common Brass Voicings

Four types of brass section voicing are discussed in this section of the project text. The terminology used and inclusion of topics can be supported by the following sources:

Basie Voicings

Bob Mintzer (Edelstein, 2004) said, "Count Basie's band – it was a role model for my big band". Lowell and Pullig (2003, p. 161) also discuss the Basie style of arranging for brass. Malcolm Baker (1993), O'Rourke (n.d.) and Brinkman (n.d.) discuss Basie voicings for brass including parallel coupling. Broughton (McKenzie, 2006a) is an exponent of parallel coupling in his writing for brass. Sometimes he voices the trombones "a little more open". Russo (1961, p. 36)

describes a "thickened line" that is a parallel coupling, "designed for rapid passages…the identical contours of all four voices make identical stress and accent and inflection easier to achieve".

Unison Trumpets, Chorded Trombones

Lowell and Pullig (2003, p. 14) and Nettles and Graf (1997, p. 173) call this voicing style "Independent Lead" that "works well where a less driving feel is acceptable, and for pickups". Example 119 in the project is the score of "Clouds on Blue" (Davidson, 2007a) and the associated recording of "Clouds on Blue" (Davidson, 2007b).

Medium Range Leads

Baker (1993) describes a medium range lead type voicing using trumpets "in a closed four-part style'. Mintzer (McKenzie, 2006b) says to "tighten up the voicings for stabs".

Higher Trumpet Leads

Baker (1993) describes a higher range trumpet lead type voicing as "added-note style (1st and 4th doubled at the octave)". Pease and Pullig (2001, pp. 109-118) include a chapter on "voicing with upper structure triads" that give a "powerful sound containing a high level of resonance". Ed Wilson (McKenzie, 2008) almost always uses the voicing called neutral voicing in the project text, in his writing.

Easy Routine For Scoring Open Brass Chords

In describing a routine for scoring open brass chord in the project text, it was emphasized that the distance between the trumpets and trombones was important. Baker (1993) states that, in the lead trombone part, there should be "enough distance from the root to allow it to sound without being muddy". Broughton (McKenzie, 2006a) says that it does not matter if fourth trumpet and first

trombone double notes. Wilson (McKenzie, 2008) sometimes doubles fourth trumpet and first trombone but is conscious of where they both sit in a voicing.

Project Section 9.2 – Mutes

This section deals with the use of mutes in brass writing. Fifty percent of the texts investigated (Table 37) included chapters on mutes.

Lowell and Pullig (2003, pp. 119-122) and Thomas (2003) discuss brass mutes in detail. Hill (2001, p. 60) states that "the brass will use cup, straight, harmon, and bucket mutes, and a set of plunger mutes…the harmon stem is usually out except for special effects". Broughton (McKenzie, 2006a) quotes Eric Lodestone as saying, "Don't use the mute to soften the instrument, use the mute to change its color". Weirick (1936) describes the Harmon and Solotone mutes.

Example 122, in the project, of cup muted trumpets is the score of "Legacy" (G. Slater, 2007a) and the recording of "Legacy" (G. Slater, 2007b). Examples 123 and 124 in the project are score extracts of "East Side Lonely" (Irwin, 2006). Examples 125 and 126 in the project are the score of "Dialmentia" (T. Davies, 2003a) and the recording of "Dialmentia" (T. Davies, 2003b).

The further listening examples provided are the Count Basie recordings of "88 Basie Street" (Nestico, 1983) and "It's About Time" (Nestico, 1971).

Project Section 9.3 – More on Brass Section Writing

In this section, further discussion of brass writing is made following the basic discussions of earlier in the chapter.

Nestico's Basie Voicings

Sammy Nestico's style of brass voicing is discussed in this section of the project. An exercise for brass voicings has been included in the project which could be done in class or as extra work.

Other Brass

This section discusses other brass instruments used in big band arranging. Eight of fourteen published texts investigated (Table 37) included a chapter on french horn and tuba. Other sources supporting this discussion include Jim McNeely who likes to use a french horn in his ten-piece band.

> I've noticed that you put a french horn in the middle of almost anything, and it sounds better . . . Although it's a brass instrument, it's got such a different sound, it can really blend really great with saxophones, it can blend really well with other woodwinds. It's a very flexible instrument. (McNeely, as cited in Tafuri, n.d.)

McNeely (Tafuri, n.d.) also likes the tuba because "when you fill out the bottom, it really helps fill out everything". Pirtle (1993) describes Stan Kenton's mellophoniums. "The cardinal rule about the mellophonium - IT'S ALWAYS OUT OF TUNE!!" (Lutterbie, as cited in Simmonds, 2000).

Further listening examples provided are "Copenhagen Sights" (Evans, 1983) on the DVD "Gil Evans and his Orchestra at Lugano" for the use of piccolo trumpet, french horn and tuba in a big band. Rich Matteson's euphonium recording of "Georgia on My Mind" (Carmichael & Gorrell, 1930) is from an unknown albumn but available online.

In-class discussion

Sebesky includes in his book *The Contemporary Arranger* (Sebesky, 1975) an example of voicing trumpets and trombones. He compares the same passage voiced "correctly" and "incorrectly". These examples have been included in the project (Examples 128 - 130) and if the project were to be commercially produced, permission from the publisher would need to be obtained or the example replaced with an original composition demonstrating the same principles.

Project Section 9.4 - Adding Saxes to the Brass Section

In this section, the addition of saxes to the brass section is discussed. This method is supported by Lowell and Pullig (2003, p. 49) who state that "after scoring the melody for the brass section…you will then establish saxophone section parts".

Example 132 in the project text is the score of "Dialmentia" (T. Davies, 2003a) and the associated recording of "Dialmentia" (T. Davies, 2003b). Example 133 is the score of "Ariba" (Schmidli, 2000a) and the associated recording of "Ariba" (Schmidli, 2000b). Examples 134 and 135 are from the score of "Still Workin' It" (McKenzie, 2007b) and the associated recording of "Still Workin' It" (McKenzie, 2007c).

The further listening examples provided in the project text are "High Five" (Nestico, 1984), "Ya Gotta Try" (Nestico, 1977) and "Freckle Face" (Nestico, 1975), used as examples of combining saxes and brass.

Project Section 9.5 – Combining Saxes and Brass - the Soft Chorus

This section discusses the special case of a soft chorus. Example 136 in the project is using an extract of "Gotta Be My Way" (Nestico, 1993a) from *the Complete Arranger* (Nestico, 1993b). In a possible future commercial edition of this project, permission from the publisher would need to be obtained or the example replaced with an original composition.

In-class discussion

Don Sebesky includes in his book *The Contemporary Arranger* (Sebesky, 1975) an example of voicing brass and saxes. He compares the same passage voiced "correctly" and "incorrectly". This example has been included in the project (Examples 137 & 138) and if the project were to be commercially produced in the future, permission from the publisher would need to be obtained or the example replaced with an original composition demonstrating the same principles.

An exercise for tutti voicings has been included which could be done in class or as extra work.

PROJECT CHAPTER 10 – ADVANCED BIG BAND ARRANGING CONCEPTS AND ANALYSIS

In this chapter of the project text, several arrangers' works are examined that include arranging techniques beyond the basic techniques discussed in earlier chapters. Three of fourteen published texts investigated (Table 37) included a chapter on the analysis of arrangers. The survey revealed that 73% of respondents agreed that the analysis of published scores is an important constituent in a text (Table 23). Also 49% agreed that extended (advanced) arranging techniques were important.

10.1 Thad Jones

This section of the project examines some the arranging techniques of Thad Jones. The examples used in the project are the Thad Jones score to "Three and One" (Jones, 1970a) (examples 139 -143) and the associated recording of "Three and One" (Jones, 1970b). Also used is the score of "Us" (Jones, 1970c) (Example 144), the associated recording of "Us" (Jones, 1970d), the score of "Tiptoe" (Jones, 1963a) (Example 145) and the associated recording of "Tiptoe" (Jones, 1963b). The inclusion of Thad Jones' work is supported by R. Wright (1982), who devotes one third of his book to this topic.

10.2 Bob Brookmeyer

This section examines some the arranging techniques of Bob Brookmeyer. Scores used as examples in the project text are "Hello and Goodbye" (Brookmeyer, 1979a) (Examples 146 -149) and the associated recording of "Hello and Goodbye" (Brookmeyer, 1979b). Also used is the score of "ABC Blues" (Brookmeyer, 1966a) (Example 150) and the associated recording of "ABC Blues" (Brookmeyer, 1966b). The inclusion of Brookmeyer's work is supported by Ratliff (2006, p.2) who says, "His work in the mid-60's for the Thad Jones-Mel Lewis big band - like his own "ABC Blues," which used 12-tone sequences over blues changes - was intellectually challenging". Cited works in this section of the project text using dissonant minor ninth intervals, are "Pieces de Chair II" (Bussotti, 1959),

"Exercises pour Piano" (Posseur, 1956), "Prelude and Mood" (Springfield, 1998), "Sinfonia" (Berio, 1968), "Metastasis" (Xenakis, 1953), "Threnody to the Victims of Hiroshima" (Penderecki, 1961) and "Scontri" (Gorecki, 1960). Bob Brookmeyer (R. Wright, 1982, p. 181) said in relation to these intervals, "When I hear a major 7th, it sounds like it's pressing down and a minor 9th seems to be expanding, so they have shapes for me and I keep the shapes I like". "Synthetic harmony (harmony that is not identifiable as an idiomatic jazz chord) [is] found throughout Brookmeyers' writing . . . the strong voice leading of each player adds up to synthetic harmony" (R. Wright, 1982, p. 120). Avoidance of the minor 9th interval is mentioned in the project text. Pease and Pullig (2001, p. 35) say that the interval of a minor 9th should be avoided and include a table of note combinations to be avoided.

10.3 Maria Schneider

The inclusion of Maria Schneider's arranging is supported by Graeme Lyall (lecturer in Arranging at WAAPA) who names Maria Schneider as the person he would most like to collaborate with. "She creates her own colors and writes with beauty and sensitivity" (Lyall, 2006). Frank Mantooth (Goins, 2000) gives credit to Schneider as a writer who "rocks the boat . . . The spaciousness and taking time to develop her ideas were refreshing and definitely pushed the boundaries of convention" (p. 39). Bristol (1998) suggests listening to work of Schneider. Examples of Maria Schneider's writing in the project are "Bird Count" (Schneider, 1992a) (Example 151) and the associated recording of "Bird Count" (Schneider, 1992b). The score of "Gush" (Sturm, 1998) (Example 152) and the associated recording of "Gush" (Schneider, 1992c) are also used.

Summary

Chapter 10 of the project is summarised in this section of the project. Statements are made regarding Kenton's use of tension which is supported by the following quotation: "For four weeks, patrons of New York's Paramount Theater have been pinned against its back wall by Stan Kenton's klaxon-loud "progressive" blasts" (*Bopera on Broadway*, 1948).

A list of arrangers to investigate is included in the project text as a suggestion to learn from the masters. Frank Mantooth (Goins, 2000, p. 41) says that "flagrant larceny of ideas from other people is the only way one can develop". Levinson (2005, p. 42) explains how the great Nelson Riddle learnt from the masters such as Bill Finegan, Alan Shulman and Debussy. Bacharach "studied with Darius Milhaud" (Dwyer, 2008). Tommy Tycho, in an interview (Workman, 2001), states that young arrangers should study the scores of the masters. The list includes these writers and is supported by the following sources:

Sammy Nestico
Frank Mantooth (Goins, 2000, p. 39) mentions Nestico due to his sheer output of compositions. Bill Broughton (McKenzie, 2006a) also finds Nestico's work worth studying.

Lennie Niehaus
Frank Mantooth (Goins, 2000, p. 39) mentions Niehaus due to his sheer output of compositions.

Gil Evans
Frank Mantooth (Goins, 2000, p. 39) mentions Gil Evans as an early influence as did Bob Mintzer (Jarvis, 2004). Jim McNeely (Tafuri, n.d.) and Corozine (2002, p. 5) list Evans as a great composer/arranger. Lowell and Pullig (2003, p. 177) also discuss the arranging style of Gil Evans. Sebesky (1975) describes a typcal Gil Evans voicing style.

Thad Jones
Jim McNeely (Tafuri, n.d.) and Corozine (2002, p. 5) list Jones as an influential composer and arranger. Lowell and Pullig (2003, p. 161) also discuss the Basie style of arranging mentioning Thad Jones as a writer who uses this style but then extends the techniques.

Billy May
Nestico (2002) describes Billy May as "perhaps one of the greatest writers in the 20th century, if not the greatest". Corozine (2002, p. 5) also lists May as an influential arranger.

Nelson Riddle

Broughton (McKenzie, 2006a) and Corozine (2002, p. 5) mention Nelson Riddle as a vital arranger to study. Tommy Tycho, in an interview (Workman, 2001), highlights the writing of Riddle.

Maria Schneider

Maria Schneider's work was mentioned earlier in this chapter. Newcombe (McKenzie, 2007a) uses Schneider's scores as reference material.

Bob Mintzer

Frank Mantooth (Goins, 2000, p. 39) gives credit to Mintzer as a writer who has "introduced a whole new harmonic concept"(p. 39).

Jim McNeely

Frank Mantooth (Goins, 2000, p. 39) gives credit to McNeely for "writing on a larger palette and for his lack of concern with commerciality"(p. 39). Bob Brookmeyer said about McNeely (McNeely, n.d.), "Whatever the 'next step' is in music, I firmly believe he will be it. He has all the tools--imagination, technique, dreams, ambition" Bristol (1998) suggests listening to the work of McNeely.

Dave Holland

The University of Oregon MUS443 Arranging notes (Birdwell, 2005a) have Dave Holland as part of their listening program.

Bob Brookmeyer

Jim McNeely (Tafuri, n.d.) lists Brookmeyer as a great composer/arranger. Maria Schneider (Williamson, 1999) says, "He's at a level above everybody else. He can make something out of anything." Sebesky (1975) uses an example of Bob Brookmeyer's work.

Bill Holman

Lowell and Pullig (2003, p. 171) discuss Holman's melodic arranging style. Corozine (2002, p. 5) also lists Holman. Sebesky (1975) uses an example of Holman's writing. "Listen to Bill Holman's writing, it flows, and if you've every played them, you know how seamless the individual parts play" (LaBarbera, 2004).

Duke Ellington

Lowell and Pullig (2003, p. 167) discuss the arranging style of Duke Ellington. Corozine (2002, p. 5) also lists Ellington. Newcombe (McKenzie, 2007a) describes how he asks some students to research Ellington's work.

Neal Hefti

Corozine (2002, p. 5) lists Hefti as highly skilled.

Others

Frank Mantooth (Goins, 2000, p. 50) lists Victor Lopez, George Stone and Dean Sorenson as good new writers. Corozine (2002, p. 5) lists Henry Mancini, John Williams, Quincy Jones, Bob Florence, and Don Sebesky. Tommy Tycho, in an interview (Workman, 2001), mentions Mancini as a great arranger.

PROJECT CHAPTER 11 – ORCHESTRATION

This chapter of the project deals with orchestration orchestral terms as an extension of the big band scoring methods discussed in previous project chapters. Six of fourteen published texts investigated (Table 37) included a chapter on orchestration. The survey revealed that 48% of respondents agreed that orchestration is an important constituent in a text (Table 23). There are numerous texts devoted entirely to orchestration and references to some of these books are made within this chapter.

Project Section 11.1 – Orchestration Basics

This section of the project discusses basics of orchestration and the statements made within the project are supported by the following sources. Nestico (2002) says "using somebody's original music - you don't change the melody. You don't change anything." Broughton (McKenzie, 2006a) believes that an orchestrator can have some creativity if there is a good working relationship with the composer. An orchestrator "does not usually alter the musical quality, harmony, or rhythm. He or she just scores the composition so that it is consistent with the instrumental and vocal capabilities of the artists" (Field, 1995).

The orchestrator is important in movie scoring. Australian film composer Bruce Rowland admires in composers "the ability to write a theme that can be performed in many ways, that people can remember, that sets a mood. And to do all of this without relying on an orchestrator to do it for you" (Rowland, 2006). Broughton (McKenzie, 2006a) believes that film scoring has changed dramatically in the past decade due to the advent of the synthesizer and computer. There is less done by orchestras and a lot of contemporary scores are percussion orientated. He also

believes that we have "lost the art of Orchestration and Arranging" but still, "an orchestrator can make everything . . . orchestrators can make or break you."

Frank Mantooth (Goins, 2000, p. 50) says that the orchestra is basically the same as the big band, as for as harmonic ideas are concerned, but you have a wider panorama of colours from which to choose. Broughton (McKenzie, 2006a) says "I think it's more exciting for orchestra because you have so many more choices".

> Anybody's writing can sound good with an orchestra, but a quartet is a bitch. The larger the ensemble, the more combinations of instruments there are to play with. No brainer. Just keep changing or combining sections as the work plays along. A full orchestra is capable of so much variety of color that *do-re-mi* can sound fresh and vital. However, the fewer instruments you have, the harder it is to give the work the musical variety that's necessary to hold an audience's attention and interest. (LaBarbera, 2004)

Definition and Constitution of an Orchestra

In this section of the project, the constitution of the orchestra is defined.

> A group of musicians who play together on a variety of instruments, which usually come from all four instrument families — brass, percussion, strings, and woodwinds… Most orchestras, unlike chamber music groups, have more than one musician playing each musical part. (*Answers.com:Orchestra*, 2007)

Score Order

The score order that is traditionally used is listed in this section of the project. The score order list used in the project was found on the Dartmouth College website (*Score Order*, 2006). "If you want to learn about orchestration, take a look at Ravel's scores." – Buddy DeFranco (Levinson, 2005, p. 50). This quote is used in the project text.

Project Section 11.2 – Strings

In this section of the project, the scoring of strings is discussed. Five of fourteen published texts investigated (Table 37) included a chapter on string orchestration.

The survey revealed that 48% of respondents agreed that orchestral orchestration is an important constituent in a text (Table 23).

Statements made in the project text about string bowing are supported by Keller (1981), who argues that the composer should not use bowing markings and allow the concertmaster to make such decisions. Broughton (McKenzie, 2006a) said that in his Hollywood days he would always mark the bowings as that saved time and also money in the studio. The discussion about the extra low string on a double bass is supported by the following source:

> In the United States, Canada and United Kingdom, most professional orchestral players use four-string double basses with an "C extension" which extends the lowest string down as far as low C, an octave below the lowest note on the cello (more rarely, this string may be tuned to a low B). The extension is an extra section of fingerboard mounted up over the head of the bass, which requires the player to reach back over the pegs to play, or to use a mechanical lever system. (*Double Bass - Wikipedia, the free encyclopedia,* 2007*)*

The Standard String Section

In this section, the constitution of a standardized string section is discussed. Will Malone (Mellor, 2001) says that the number of string players depends on the texture and warmth needed. Sometimes he uses ten players and other times up to forty.

Further listening examples provided in the project are the love theme from "Romeo and Juliet" (Tchaikovsky, 1870), the "Dance of the Cygnets" from "Swan Lake" (Tchaikovsky, 1877), several extracts from"Young Person's Guide to the Orchestra" (Britten, 1945), "Symphonie Fantastique" (Berlioz, 1830) and "Adagio For Strings" (Barber, 1938).

Strings as a Section

Scoring for strings as a section is discussed in this section of the project text. Voicing styles of Juxtaposition and Interlocking are referred to by Palmer (1964, p. 59) and O.J.Garcia (2007, p. 5). Project examples 154 to 162 are voicing examples

using "Jesu Meine Freude" (Bach, 1723a) with reference to a choir recording on Youtube (Bach, 1723b).

The Harp

The project text does not contain a large section on the harp. Several published texts do not contain a great deal of content on the subject. Mancini (1973), for example, allows only two pages in his discussion of the harp. Sebesky (1975) describes how the *Firebird Suite* (Stravinsky, 1910) contains unplayable harp passages. Levinson (2005, p. 105) describes how Nelson Riddle was acclaimed as a great writer for the harp as he studied Ravel and Debussy's harp writing.

The further listening example provided in the project text is Sebesky's arrangement of "Day By Day" (S. L. Schwartz, 1970) with harp and without harp.

Project Section 11.3 – Woodwinds

This section of the project text discusses the scoring of woodwinds orchestrally as opposed to previous discussions where the woodwinds were treated as doubles of the saxophone players in a band setting. Nine of fourteen published texts investigated (Table 37) included a chapter on woodwind orchestration. The survey revealed that 78% of respondents agreed that woodwind scoring is an important constituent in a text (Table 23).

The woodwind range chart provided in the project text was adapted from the one found in Kennan (1983). Sebesky (1975) describes the tonal registers of the woodwinds and discusses how a range chart should be used in conjunction with this information.

Further listening examples provided in the project text are an extract from the score of "Bolero" (Ravel, 1928a), described by Sebesky (1975), plus an audio extract from a recording of "Bolero" (Ravel, 1928b). Sebesky (1975) includes examples of piccolo with seven brass and strings with flute which is called Example 11 in his book. Other examples provided are the "Young Person's Guide to the Orchestra" (Britten, 1945) which demonstrates woodwind instruments individually and

collectively, "Dance of the Sugar Plum Fairy" (Tchaikovsky, 1892) which is used as an example of bass clarinet, "Iberia" (Debussy, 1908) which is used as an example of two oboes, "Symphony no. 9" (Dvorak, 1893) which is used as an example of solo cor anglais, "The Rite of Spring" (Stravinsky, 1913) which is used as an example of solo bassoon, "The Sorcerer's Apprentice" (Dukas, 1897) which is used as an example of contra bassoon, "Firebird/Birds of Fire" (Sebesky, 1973) which is used as an example of using clarinets to thicken strings and "Road Time Shuffle" (Akiyoshi, 1975) which is used in the project as an example of mixed orchestral woodwind, including alto clarinet, in a big band setting.

Project Section 11.4 – Orchestral Brass

The brass section in a big band setting was discussed extensively in earlier chapters of the project. This section discusses the scoring of brass in an orchestral setting. Further listening examples used in the project are Sebesky's (1975) track titled "Jimmy Buffington Demonstrates French Horn Sounds", "Rondeau" (Mouret, c. 1720) (baroque style trumpet), "Rondo: Allegro Molto from Concerto for Trumpet and orchestra in E-flat Major" (Hummel, c.1800) (trumpet solo with orchestra), "Flight of the Bumble Bee" (N. Rimsky-Korsakov, 1900) recorded by Christian Lindberg (an example of virtuoso trombone playing), "Good Night' (Berio, 1986) recorded by Christian Lindberg (an example of alto trombone), "Capriccio" (Penderecki, 1980) (an example of virtuoso tuba playing), "Great Gate of Kiev" (Mussorgsky, 1874b) transcribed by Elgar Howarth for the Summit Brass (an example of large brass ensemble writing) and Sebesky's (1975) example of unison viola, cello and clarinet with and without horn.

In discussing unusual instruments, the following sources support statements made in the project:
"Always check in advance which doubling instruments are owned" (Lowell & Pullig, 2003, p. 117). Bruce Broughton (2006) says that the music to the movie *Tombstone* "relies, in fact, on instruments of ethnic color like the Hungarian cimbalom, the Irish tin whistle and bhodran, and the French contrabass sarrusophone. The brass section includes, along with tenor and bass trombones, the more massive contrabass trombone." Cezary Skubiszewski uses instruments

including the "uilleann pipe" (Cinefile, 2003). Maria Schneider used accordion, wordless vocals and contrabass trombone on her CD "Concert in the Garden" (Garelick, 2004).

Project Section 11.5 – Scoring Chords for Orchestral Sections

This section presents scoring methods for the orchestral sections.

Examples 165 to 168 in the project relate to woodwind section scoring. Reference is made to Kennan (1970) for further study.

Example 169 relates to brass section scoring. Reference is made to Kennan (1970) for further study.

Example 170 is from the Seventh Symphony (Beethoven, 1811). Reference is made to Kennan (1970) for further study.

Project Section 11.6 – Chords for the Orchestra

Reference is made to Kennan (1970) for further study in this section of the project discussing scoring full chords for the orchestra.

Project Section 11.7 – Dissonances and Doublings

Dissonances and doublings of instrument colours are discussed in this section with support from Kendall and Vassilakis (2007), who offer a mainly scientific approach as to why timbre affects the level of dissonance. The love theme from "Romeo and Juliet" (Tchaikovsky, 1870) is mentioned as an example of timbre doublings.

PROJECT CHAPTER 12 - TRANSCRIPTIONS, CONCERT BANDS AND ARRANGING FOR VOICES

This chapter discusses transriptions of works for concert band, brass band and a section about arranging for voices. Thirty nine percent of lecturers surveyed (Table

23) agreed that concert (and brass) band scoring was an important constituent of a text book. While there are some specialist books on the subject, only one of the fourteen text books investigated (Table 37) included a chapter on concert (symphonic wind) band scoring. Sixty four percent of lecturers surveyed (Table 23) agreed that scoring for voices was an important constituent of a text book. Only four of the fourteen text books investigated (Table 37) included a chapter on scoring for voices. As a result, only a section of a chapter, rather than a full chapter, was included in the project text.

Project Section 12.1 – Problems in Transcribing Piano Music

This section identifies problems that can occur in transcribing piano music. Levinson (2005, p. 75) discusses how Mario Castelnuovo-Tedesco would teach orchestration by transcribing piano music to the orchestra. Reference is made to Kennan (1970) for further study and examples within that book are cited. An exercise for transcribing a piano part to orchestra has been included in the project which could be done in class or as extra work. A solution is provided but emphasis is made to the fact there are numerous possible solutions.

Project Section 12.2 – Transcribing for the Concert Band

This section of the project discusses transcribing for the concert band. The following sources provide support for the statements made in the project: Broughton (McKenzie, 2006a) says, "I think if it's written well in one idiom, it will go well in any idiom". Pease and Pullig (2001, p. viii) state that their book, written for wind instruments can have the concepts applied to "voices, strings, guitars and keyboards".

A quote of Richard Franko Goldman (1961, p. 170) was used in the project. Brass bands were also mentioned in the project. "The experienced arranger will find that there is, in fact, considerable tonal variety within the brass band even though it is all brass tone" (D. Wright, 1967, p. 21). Broughton (McKenzie, 2006a) is doing more brass band writing these days. "Brass band is tough, because you

have brights and mellows; you have to use mutes because mutes change your timbre."

Bordo (2001, pp. 42-48) discusses band transcriptions and suggests some of the better transcriptions are the Hindsley transcription of Pictures at an Exhibition (Mussorgsky, 1874a) and the Krance transcription of Carmina Burana (Orff, 1936). These are mentioned in the project for further listening.

Concert (Symphonic Wind) band scoring texts suggested in the project text for further study are *The Complete Arranger* (Nestico, 1993b), *Scoring for Band* (Lang, 1950) and *Band Scoring* (Wagner, 1960). The latter two are extensive texts on the subject.

Project Section 12.3 – Arranging for Voices

This section of the project discusses arranging techniques for voices.
Example 173 used in the project is "Jesu, Joy of Man's Desiring" by Bach.
The further listening example is the Mormon Tabernacle Choir recording of "Jesu, Joy of Man's Desiring" (Bach, c.1744).

The statement in the project that tenor voice parts are written in treble is supported by E. Schwartz (2007) who says, "The vocal tenor clef is used in vocal music for the male tenor voice part to indicate that the tenor voice actually sounds an octave lower that where it is notated in the normal treble clef".

With regard to lyrics, Alan Bergman (Levinson, 2005, p. 142) says that "a good arranger takes into consideration the lyrics and the music when he decides how to score it".

> Nelson [Riddle] really created a wonderful place for Frank [Sinatra] to sing in . . . But besides that there's always that element of knowing how to create a counterline or brass figures or reed figures that play underneath the vocal, but don't take away from it. (Levinson, 2005, p. 294)

With reference to the statement regarding vocal chart writing being difficult, Graham Lyall (personal communication, May, 2005) stated at the Generations in Jazz Band Director's meeting, Mount Gambier 2005, that arrangements for vocalists and big band are more difficult to write and play sensitively than instrumental arrangements.

Further listening examples provided in the project are the CDs "Diane Schuur and the Count Basie Orchestra" (Schuur & Basie, 1987), "Ella and Basie" (Basie & Fitzgerald, 1963), "From this Moment On" (Krall, 2006) and "The Capitol Years" (Sinatra, 1990).

TOPICS NOT USED IN THE PROJECT

The survey (Table 23) revealed that 24% of respondents agreed that film scoring should be included, 31% agreed that the use of software packages be included, 42% agreed that arranging for young performers be included and 37% agreed that copyright should be included in a text. Of the fourteen published texts investigated (Table 37), only one included a chapter on film scoring, two included the use of software packages, and one included scoring for young performers. As a result, these topics were not included in the project in the interest of maintaining a twelve chapter text. The use of software packages was mentioned briefly in chapter 2 of the project.

SUMMARY

This chapter has justified the inclusion of each element or section of the project by directly relating it to the results of the survey and the review of the literature. Topics have also been identified as not being sufficiently supported by the literature and data and have therefore not been included. The next chapter will draw conclusions and respond to the research question and its sub-questions. Finally, recommendations for future research will be made.

CHAPTER 5

CONCLUSIONS

The research question asked "what are the constituent parts and theoretical underpinnings of a model Arranging course text book?" Through research of relevant published texts and a comprehensive survey of academics currently working in tertiary education, the constituent parts have been identified and included in the project. The theoretical underpinnings have been established through literature review.

The first sub questions asked "what materials are currently being used by lecturers and teachers throughout Australasian universities, colleges and other institutions for the delivery of arranging (and/or orchestration) courses, and do these materials differ from those used in North America?" Through the survey, the materials currently being used were identified. It was noted that there was little difference in the use of published texts as most texts used in Australia are from North America. The main difference is where Australian lecturers design their own course notes.

The second sub question asked "what assumptions are made in the background knowledge of the students entering these courses from upper-secondary level or otherwise and can this project assist students making the transition?" Through the survey these assumptions were identified. Although it was not clear if this project could be of any assistance, most of the knowledge areas were included in the chapter on basics.

The third sub question asked "is there potential to have a standard text published in Australia, what are the important elements that should be included, and is it possible to deliver such a text as an online document?" From the positive responses from the survey participants, it is apparent that there is potential to have a text published in Australia, although it would be for a relatively small market. The important elements were identified by the survey and literature search. The possibility to deliver a text as an online document was not clear from the survey findings. As some courses are delivered wholly or partly online in the U.S.A., it would seem that it is possible to

deliver the text online. All the text and images could quite simply be converted to a web based format, such as HTML, with links to compressed sound files, such as mp3 formatted files. This is a possible topic for future research.

RECOMMENDATIONS FOR FUTURE RESEACH

Further research could be done into the investigation of copyright issues and possibly composing original works to use as examples. Many of the compositions used in the project are either original, in the public domain or permission has been obtained from the relevant coyright holders. Some tunes however at this stage are still subject to copyright. If the project were to be published, either the relevant licensing fees would need to be paid or other non copyrighted works would require sourcing.

The spacing and length of the chapters in the project could be tested in realtime using a class of students. It may be found that some chapters are too long or too short. There may be a need to adjust the length and balance of topics in these chapters. In reality, this may be difficult as various courses have different time allocations to classes.

Further research could also be done into the conversion of the project's text into an online delivered course format such as HTML. Links to compressed audio (mp3) files of the audio examples would be needed. Research would be required to investigate whether students could work autominously with such an on-line text or where a combination of on-line and face to face course work would be needed.

SUMMARY

This study revealed some important findings about the lack of a course method book that met the needs of educators delivering post secondary courses in arranging. The key elements of such a course book were identified through research and then written into a model text (the project) with accompanying CD audio examples. Upon gaining valuable insights and completing the project, there is scope for improving, extending (or changing delivery method) and publishing the project.

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APPENDIX 1 - THE PLAIN LANGUAGE STATEMENT INCLUDING ETHICAL CONSIDERATIONS.

INVITATION TO PARTICIPATE IN A RESEARCH PROJECT

PROJECT INFORMATION STATEMENT

Project Title:

o   Arranging and Orchestration methods: A model text for post-secondary courses.

Investigators:

o   Mr. Daryl McKenzie (Master of Education student, dmck@netspace.net.au, 0418 392 003)

o   Dr David Forrest (Project Supervisor: Associate Professor, Program Manager - Music & Arts, School of Education, RMIT University, david.forrest@rmit.edu.au, (03) 9925 4920)

Dear …

You are invited to participate in a research project being conducted by RMIT University. This information sheet describes the project in straightforward language, or 'plain English'. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any questions about the project, please ask one of the investigators.

Who is involved in this research project? Why is it being conducted?

The project is being conducted by Daryl McKenzie as part of a Masters degree in Education by project. I currently lecture in Arranging and Orchestration at the Victorian College of the Arts and the Defence Force School of Music. The supervisor for this research is Associate Professor David Forrest of the School of Education, RMIT University. The project has been approved by the RMIT Human Research Ethics Committee.

Why have you been approached?

You have been approached with this invitation, as I believe you are currently involved in the delivery of a post-secondary music course utilizing Arranging and/or Orchestration. Your contact details were found through the University of Generic's website where it was shown that you are the lecturer of Advanced Orchestration I, as part of the Bachelor of Music program. If this is not the case and you do not currently lecture in this area, please select the appropriate response at survey item #1 and return the survey by following the instructions.

What is the project about? What are the questions being addressed?

The project being conducted will look at what materials, if any, are currently being used as texts, method books or course guides in post secondary Arranging and Orchestration courses. It is the researcher's belief that most lecturers either use fragments of existing published method books that are not designed as a course text, or have developed their own method book specifically for the purposes of their course which may be sourced from several books (resulting in a lack of continuity) or written from personal experience. The researcher proposes to investigate what are the constituent parts and theoretical underpinnings of a model Arranging course book. Following the research, a comprehensive model arranging/orchestration method book suitable as a course text will be produced. The proposed project will take the form of a textbook incorporating musical examples and audio recordings. It is anticipated that all lecturers of Arranging and/or Orchestration throughout Australia and New Zealand (including universities, TAFE colleges and private providers) will be invited to participate.

If I agree to participate, what will I be required to do?

If you agree to participate, you will be asked to complete a survey questionnaire that should take no more than 10 minutes to complete. **Please complete and submit the questionnaire within two weeks (by November 3).** Questions relate to the material you use and the methods you use in teaching Arranging and Orchestration - please feel free to peruse the questionnaire (loctated at

) before deciding. While this survey is anonymous, you will also be invited to provide contact information if you would be happy to be contacted again for further information related to this project.

What are the risks or disadvantages associated with participation?

There are no perceived risks or disadvantages in participating in this project.

What are the benefits associated with participation?

There are no direct benefits associated with participation in this project; however, there is potentially a course text to be produced at the completion of the project, which may be of use in your own teaching.

What will happen to the information I provide?

All information received will be kept confidential and your anonymity preserved. Contact information will only be kept if you agree to provide such information for follow up questions. Identified data will only been seen by the researcher and research supervisor and will be aggregated. The research data will be kept securely at RMIT for a period of 5 years before being destroyed. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, (2) a court order is produced, or (3) you provide the researchers with written permission. The results of the research will be disseminated by a research report (exegesis), post-graduate student presentation, and possibly papers for publication. Because of the nature of data collection, I am not obtaining written informed consent from you. Instead, I am assuming that you have given consent by your completion and return of the materials (i.e., the questionnaire).

What are my rights as a participant?

As a participant you have the right to withdraw your participation at any time, without prejudice. You have the right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified, and provided that so doing does not increase the risk for the participant. You also have the right to have any questions answered at any time

Whom should I contact if I have any questions?

If you have any questions, feel free to contact Daryl McKenzie (the researcher) or David Forrest (the supervisor) at the email addresses or phone numbers listed above.

What other issues should I be aware of before deciding whether to participate?

As a participant in this research, you should become familiar with your own employer's guidelines regarding the confidentiality, if any, of course methods or course content detail.

Should you agree to participate, I thank you for your interest and participation and genuinely appreciate your time. To complete the survey, go to http://dmck.customer.netspace.net.au/survey1.htm in your web browser, complete the responses as instructed and when completed, click on the submit button at the end of the page.

Yours sincerely

Daryl McKenzie
Dip Arts (Mus), Assoc.Dip.App.Physics

APPENDIX 2 - QUESTIONNAIRE

Arranging and Orchestration methods: A model text for post-secondary courses.

Researcher: Daryl McKenzie (RMIT University)

I.   Demographics:

1. Area of expertise: ☐ Arranging (only)   ☐ Orchestration (only)

☐ Arranging AND orchestration

☐ None of the above (do not complete remainder of

the survey, go to the bottom of the page and click on "submit". Thank you.)

2. Level of subject delivery (choose more than one response if applicable):

☐ Diploma/Advance Diploma ☐ Degree (Undergraduate/Honours)

☐ Post Graduate   ☐ Other: _____

3. Years lecturing Arranging/Orchestration:

☐ 1 year or less   ☐ 2-3 years   ☐ 4-5 years

☐ 5-10 years   ☐ 10 years or more

4. Type of institution: ☐ TAFE college   ☐ University

☐ Private college   ☐ Other_____

II.   Professional Practice:

5. In your place of work, who makes the decisions regarding the setting of curriculum or a course guide detailing the topics covered for the duration of the course? (choose more than one response if applicable):

☐ You as the lecturer.   ☐ The department head.

☐ The head of school.   ☐ Other_____

6. In the course you deliver, are there texts that students require access to and/or suggested reference books?

☐ Yes   ☐ No (If no, go to question 10)

7. In your place of work, who makes the decisions regarding the setting of required texts and references for your course? (choose more than one response if applicable):

☐ You as the lecturer.   ☐ The department head.
☐ The head of school.   ☐ Other_____

8. When are students made aware of the required texts and materials?

☐ They are listed on our website and therefore available before enrollment.
☐ They are made available in course information delivered on enrollment.
☐ They are made available in the first lecture/class.
☐ Other_____

9. Is there any research undertaken into the availability of required texts in your institution's library or an easily accessible library?

☐ Yes   ☐ No

10. In the course that you deliver, do you use (choose more than one response if applicable):
☐ a prepared set of course notes?
☐ a single required textbook?
☐ multiple required textbooks?
☐ a software based or on-line course method?

☐ none of the above? (Comments? _____)

11. If you use a prepared set of course notes, who has prepared these notes?

☐ You as the lecturer.　　☐ The department head.

☐ An external contractor.　☐ Other_____

12. If you use required text book(s), please enter the authors below:

(a) readily available published texts:

_____

(b) obscure published texts (please also provide publisher): -

_____

(c) unpublished texts:

_____

13. If you use a list of suggested references, please enter the authors below:

(a) readily available published texts:

_____

(b) obscure published texts (please also provide publisher): -

_____

(c) unpublished texts:

_____

14. If you use a software based or on-line course method, please enter details below:

_____

15. What assumptions are made in the background knowledge of students entering your courses? (answer only in reference to the first level of Arranging/Orchestration subjects. i.e. a subject called Arranging 4 would assume the students had passed Arranging 3) (choose more than one response if applicable):

☐ None.   ☐ Basic notation (e.g. clefs, note values, note pitches).
☐ Triadic chord and scale construction.   ☐ Basic forms, progressions and the
cycle of 4th's (e.g. II-V-I and turnarounds). ☐ Chord extensions and altered chords.
☐ Tritone substitutions. ☐ Harmonic cadences. ☐ Basic voicing styles (e.g. close
and open position, inversions). ☐ Transposition. ☐ Common instrument
transpositions. ☐ Common instrument ranges. ☐ Familiarity with computer notation
programs (e.g. Sibelius, Finale). ☐ Other_____

16. The important theoretical constituents of an Arranging textbook should include
(but not be limited to) (choose more than one response if applicable):

☐ Basic concepts of standard notation and nomenclature. ☐ Transpositions and
instrument ranges. ☐ Voicing styles. ☐ Basic analysis of tunes including form,
melody, harmony and cadences. ☐ Melodic development. ☐ Reharmonization and
chord substitutions. ☐ Counterpoint. ☐ Scoring for the Rhythm Section. ☐ Small
ensemble arranging. ☐ Brass scoring and standard methods. ☐ Woodwind scoring
and standard methods. ☐ Big band arranging concepts. ☐ analysis of published
scores. ☐ A historical perspective of arranging. ☐ Orchestral orchestration. ☐
Arranging for voices. ☐ Extended arranging techniques. ☐ Scoring for film. ☐ The
use of software packages. ☐ Arranging for young performers. ☐ Publishing and
copyright.
☐ Other (please specify)_____

Using the following 1 - 4 scale, please indicate, by selecting the most correct response
in the pull-down menu, the degree to which you agree with the statements listed
below:

1	2	3	4
strongly disagree	disagree	agree	strongly agree

17. There does not exist, one single published textbook that satisfies the needs of the course(s) I deliver without the use of additional notes or texts.

[dropdown]

18. The use of multiple methods or extracts of methods results in a lack of uniformity or cohesion in the material delivered in a course.

[dropdown]

19. It is important that students have access to audio examples demonstrating the arranging and/or orchestration theory being presented.

[dropdown]

20. Most published method books or texts demonstrate good arranging and/or orchestration technique and fail to contrast with examples of poor technique.

[dropdown]

21. It is possible to deliver an Arranging course as an online course if students have access to scoring and playback software.

[dropdown]

22. It is possible to deliver an Orchestration course as an online course if students have access to scoring and playback software.

[dropdown]

23. It is important that students hear their project work played by musicians (as opposed to software instruments) and therefore, a course in Arranging or Orchestration should incorporate at least one session with an ensemble (either

present in the class or have recordings made externally and delivered to the

students). [dropdown field]

III Short Answer Questions:

Please respond briefly to the following questions:

24. If you use a required text book(s) in the course(s) that you deliver, what are the strengths and weaknesses of these books? (For example, a book may be considered a little limited and old fashioned in it's discussion of big band arranging.)

25. If you use your own course notes (in conjunction with a text or not) in the course(s) that you deliver, please give a brief description of the content of these notes, the major sources of these notes and the format of these notes (e.g., a bound document, hand outs each class, on-line documentation) along with your opinion as to your satisfactory delivery of the course using your notes. (e.g., I'm not satisfied that my notes cover enough ground in reharmonization and therefore I use extracts from another published source as additional text).

26. In your opinion, are there any differences in the requirements of Arranging and Orchestration teaching materials used in Australia/New Zealand as opposed to North America? If yes, please give some insight to your opinion.

27. Any further comments or issues not addressed in this questionnaire that you feel are important?

THANK YOU FOR YOUR PARTICIPATION.

If you are interested in any follow up discussion on this subject, please provide your contact information. In providing your contact information, your data will be kept confidential.

Contact Information (Phone or Email): _____

Please click on the "Submit" button below to send your answers. Please note that depending on your email software, you may be presented with an email containing all your answers. Please do not alter this email, simply click on "Send".

APPENDIX 3 – CD AUDIO TRACK LIST

Listening Examples CD Track List

1. Ex 16 In Case You Missed It
2. Ex 17 You Don't Know What…
3. Ex 21 Black Nile
4. Ex 22 Stella by Starlight
5. Ex 25a Autumn Leaves original
6. Ex 25b Autumn Leaves arranged
7. Ex 35 You Don't Know What…
8. Ex 37 Secret Love
9. Ex 38/39 Just Friends
10. Ex 42 Still Workin' It
11. Ex 45 Skylark
12. Ex 49a Beautiful Love 1
13. Ex 49b Beautiful Love 2
14. Ex 51a Yesterdays 1
15. Ex 51b Yesterdays 2
16. Ex 51c Yesterdays 3
17. Ex 54a All The Way
18. Ex 54b All the Way
19. Ex 56 Stella by Starlight 1
20. Ex 57 Stella by Starlight 2
21. Chord Substitution Exercise
22. Ex 63a All The Things You Are
23. Ex 63b All The Things You Are
24. Ex 75 Devil's Island
25. Ex 76 King Cobra
26. Ex 77 Day in Vienna
27. Ex 78 You Don't Know What…
28. Ex 79 King Cobra
29. Ex 81 Nutville
30. Ex 82 Miss Bessie's Cookin'
31. Ex 83 Three and One Ex's.
32. Ex 84a Lushlife original
33. Ex 84b Lushlife reharmonized
34. Ex 86 Just Friends
35. Ex 87 Upon a Rock
36. Ex 88 Upon a Rock
37. Ex 89 Hola
38. Ex 90 Still Workin' It

39. Ex 91 Hola
40. Ex 92 Clouds on Blue
41. Ex 93 Legacy
42. Ex 98 Three and One
43. Ex 104 Donna Lee
44. Ex 106 Dialmentia
45. Ex 107 Still Workin' It
46. Ex 108 Hola
47. Ex 109 Clouds on Blue
48. Ex 110 Trbs.
49. Ex 111 Trbs.
50. Ex 112 Trbs.
51. Ex 113 Trbs.
52. Ex 114 Still Workin' It
53. Ex 115 Still Workin' It
54. Ex 116 Brass
55. Ex 117 Brass
56. Ex 118 Brass
57. Ex 119 Clouds on Blue
58. Ex 122 Legacy
59. Ex 123 East Side Lonely
60. Ex 124 East Side Lonely
61. Ex 125 Dialmentia
62. Ex 126 Dialmentia
63. Ex 131 Brass
64. Ex 132 Dialmentia
65. Ex 133 Ariba
66. Ex 134 Still Workin' It
67. Ex 135 Still Workin' It
68. Ex 136 Gotta Be My Way
69. Ex 139,140, 141 Three and One
70. Ex 142 Three and One
71. Ex 143 Three and One
72. Ex 144 Us
73. Ex 145 Tip Toe
74. Ex 146,147,148 Hello & Goodbye
75. Ex 149 Hello & Goodbye
76. Ex 150 ABC Blues
77. Ex 152 Gush

Arranging and Orchestration methods:
a model text for post secondary courses

A project submitted in fulfillment of the requirements
for the degree of Master of Education

Volume 2

Daryl A. McKenzie
DipArts(Mus) VCA, AssocDipAppSc(AppPhys) RMIT

Arranging and Orchestration

a method for tertiary study

Daryl McKenzie

Contents

Introduction

Frank Zappa once said, "Talking about music is like dancing about architecture". Indeed the ultimate test of worth of any musical endeavour is whether it sounds good and not what any one said about it. Duke Ellington said, "If it sounds good and feels good, then it is good!" ("IAJE Jazz Cryptoquote," 2006) This should always be the end result in any discussion of arranging technique.

There was a movement amongst the avante garde composers of the twentieth century to push boundaries regardless of the reaction of an audience. However, the majority of a listening audience would measure the success of a piece of music by its ability to stimulate the brain emotionally through its elements including melody, harmony, structure, rhythm, lyrics and instrumentation. These elements usually conform to a set of boundaries established historically by the listener. For example one listener may find a country and western song appealing if they had grown up in an isolated environment where this style of music was the only music heard, while another listener may find the same music juvenile had they studied the music of Stravinsky in depth. So to talk about music is important if we wish to establish where the boundaries lie in our society in order to create music that is socially acceptable – an aim of many musicians. "There can be no art without some kind of constraint" (Davies, 1978, p. 19).

The aim of this book is to explore the established methods of Arranging and Orchestration and establish some guidelines that the student of Arranging could adopt to develop their craft in a manner that conforms to what we might call 'established arranging technique'. Through references to published authors on this topic, a method has been developed that includes the areas of arranging technique considered essential by educators in this field.

Each chapter is laid out in such a way that a weekly lecture could cover the arranging theory and listening examples, depending on the length of the lesson and number of weeks available. In some cases, chapters could be divided over two or more sessions.

Some discussions are included for the use of the lecturer in a class situation. Listening examples have been listed as a class resource and study could be undertaken following further references listed and exercises included. Some exercises in later chapters may require more than one week to complete and may indeed require some class time to workshop with the lecturer. An accompanying CD contains recordings of some of the musical examples contained in this book.

Musical examples in this book have been condensed to single pages for ease of copying if required.

Definitions

In researching the art of Arranging and Orchestration there is some ambiguity and contradiction amongst references as to what these terms actually mean.

Keefe and Ingles (1990) in *Harrap's Illustrated Dictionary of Music and Musicians* offer a concise definition of Orchestration as: "Art of blending and contrasting the tonal qualities of the various orchestral instruments" (p. 366) and Arranging as: "The addition of harmonized accompaniment to an existing melody" (p. 22).

Cacavas (1975) also argues that the use of Composition defines the difference between Arranging and Orchestration. He states that:

> If you are an arranger then by necessity you must be or become a composer. On the other hand, if you only orchestrate, then all you really need to know is transposition and ranges. Naturally there are many shades of gray in between, but the differences are clear cut. (p. 3)

This book will focus on Arranging with reference to Orchestration as it relates to the process of Arranging. A method book focusing on pure Orchestration would need to be a separate project entirely as a volume on the subject would be considerable in size. A method book on Arranging still requires some discussion of Orchestration, as it is an integral part of the Arranging process. Reference will be made to several books on Orchestration for further study.

Chapter 1 - Basics

1.1 Standard Notation and Nomenclature

"Music notation has always been excruciatingly inadequate" (Russo, 1961, p. iii)

Music notation is simply a code that allows a performer to reproduce the aural phenomena we call music. Historically this code has developed to a standard method of notation in Western Music. It would be well worth the beginning Arranger to revise basic notation skills (see references below for further study at the end of this chapter) before trying to arrange music for an ensemble that may not produce the best possible result due to misunderstanding the arranger's intentions. One of the codes that can cause confusion is chord symbols. Centuries ago a method of a keyboardist to improvise an accompaniment following a harmonic outline. These days, chord symbols can fulfill the same function in a rhythm section but more importantly, these chord symbols also define the harmonic context in which the arranger is working. If there is any confusion between the two, there will be a clash of ideas and therefore an unsatisfactory result.

Investigating published arrangements will result in finding numerous variations of chord symbol terminology. Conventions have changed through the decades, there are regional differences and there are differences between musical genres (e.g.,

> ✪Tip: Make sure the chord symbols in the Rhythm Section agree with the harmony you are using elsewhere in the ensemble.

jazz and commercial). In order to avoid ambiguity, an arranger should adopt the conventions used by the musicians who will be performing the work and be consistent throughout the work. The question from a musician, "what does this chord symbol mean?" or a misplayed chord due to confusion is the fault of the arranger.

This method will use either C-7 or Cmin7 to mean C minor seventh and CΔ or Cmaj7 to mean C major seventh.

> ✪Tip: Never use CM to mean major 7th

For further information regarding chord symbols, refer to Sammy Nestico's *The Complete Arranger* (1993) which includes a table of suggested chord symbol notation.

For further information regarding chord structures such as Major, Minor, Dominant Seventh, Half Diminished, Diminished, Altered Chords, Chords with added tones or foreign bass notes, refer to chapters one to five of Mark Levine's *Jazz Theory Book* (1995)

Some chords can be spelt in numerous ways (e.g., Cmin6 and Amin7b5 are the same chord but in different inversions. Gmin7/C and C9sus4 are essentially the same chord). If you end up with an overly complicated chord

symbol, it may have a simpler alternative spelling (e.g., a Bbmaj7#5#11/C could be more simply named C13#11). If in doubt use "N.C." and voice it.

1.2 Transpositions

Many instruments need their parts transposed. Sometimes a tune will sound better in another key. To transpose a part, move all notes the required interval in the same direction, change the key signature by the same interval and take care of the accidentals (e.g., Bb up a tone is a C, B up a tone is a C#). Many orchestration books by authors such as Kennan and Grantham (1983) or Nestico (1993) include charts of the transpositions of the standard big band instruments. Some arrangers prefer to work in concert pitch and others in transposed pitch. The easiest way to check if a score is in concert pitch is to check the key signatures (it's a courtesy to indicate if a score is in concert).

1.3 Instrument Ranges

For most instruments there is an upper and lower range limit determined by the mechanical limitations of the instrument. A piano for example, has a set number of keys. Brass instruments have limits determined by the technical ability of the players. Many instruments encounter tuning and tone problems at the extremes of ranges. Orchestration books such as Kennan and Grantham (1983) or Grove (1972) include excellent discussions of instrumental ranges.

1.4 Score Order

In order to present a score in a manner that is easily read, such as by a conductor, it is important that all the instruments follow established score order. Traditionally orchestral scores have woodwinds at the top, followed by brass (with french horns first), percussion and then strings. Instruments within these families follow pitch order (i.e., 1st violins, 2nd violins, violas, celli and basses). In big band scoring saxes are at the top, then brass and rhythm section. Within the rhythm section there can be variation but usually either piano or guitar is then followed by bass, drums and percussion. A voice part could either be at the top of the score or just above the rhythm section. Occasionally a voice part could be found at the bottom of the score.

1.5 The Use of Software Packages

Users of notation software packages may believe that they need not concern themselves with the transpositions of instruments and the software transposes the parts automatically. However, it still pays to check that the parts have been done properly, especially if there has been a change in transposition within a part (e.g., a sax part that changes to flute and back to

sax). Programs such as Sibelius™ also indicate when instrumental ranges are exceeded. Some instruments, especially brass, are not precise in their given ranges. There are other range considerations, which

✪Tip: Don't experiment with, or learn a new software program on an important arranging project.

must be taken into account by the arranger such as tonal, endurance, balance and tuning problems. These are not apparent if using Sibelius'™ range guides.

If you are using software instruments to audition your arrangement, be careful. The computer cannot sound like real players and issues such as dissonances are quite different.

Take the time to present your work well. If a chart looks good on paper, your musicians will be more positive in their approach to playing it. Always proofread your work beforehand. There should be no questions from your musicians – your chart should be unambiguous and complete – the musicians should not be completing a lazy arranger's work.

Chapter 2 - Before you start your first chart

2.1 Arranging Styles

To arrange music is to adapt it to a specific style, or to prepare it for performance by a specific ensemble. Adjustments may be needed in the melody or the harmony; the original key may be unsuitable; tempo may need to be determined, to fit the rhythm patterns of a chosen style. A chart for small or large band will certainly involve voicings for the horns. These are some of the decisions that must be made by an arranger.

The arranger also needs to consider such things as the context in which the arrangement will be used, the musical style of the ensemble being written for, the technical abilities of the ensemble members, and the brief that may have been delivered to the arranger.

Simple Arranging – retains most of the melodic, rhythmic and harmonic elements of a tune – most suitable for pop songs, musical theatre songs, and operatic or classical compositions. If you alter the harmony of a pop song, an audience may think that the song sounds wrong.

Skilful Arranging – adds tasteful additions to the harmonic or rhythmic elements of the tune – most suited to jazz arranging or artists that want an individual stamp on their repertoire. Many good examples exist of pop tunes arranged in a jazz environment. Skilful arranging should avoid adjustments that actually alter a tune in the process. The successful arrangement enhances the original composition itself. Obviously, arranging can become quite subjective.

Advanced Arranging – advanced manipulation of all elements of a tune. Best suited where a free artistic license is granted. This style of writing is often intellectually stimulating to musicians but not necessarily appreciated by the general public.

2.2 Balance, Economy, Focus, Variety, Purpose and Inspiration

Balance

Successful arrangements require a sense of balance in the following areas:

Tonal Balance - the distribution of tones to achieve the best sound from a combination of instruments.

Formal Balance - manipulation of harmony and melody (restrict to a few melodic ideas and use variation), instrumentation (don't use every instrument all the time) and time (length of the piece).

Economy

Sometimes 'less is more'. Omit from the score all unnecessary elements. Every note should be there for a reason. Ravel did not use the 2nd trombone in the first movement of his orchestration of *Pictures at an Exhibition,* as it was unnecessary. Be prepared to rework ideas as arranger Bob Mintzer says, "Change things as necessary as you write. For example, the harmony may be changed to suit a melody" (McKenzie, 2006b). Melbourne arranger Lachlan Davidson constantly revises his scores. Sammy Nestico said he only likes 30 of his 600 published scores and feels he could now do better.

Focus

The listener's ear must be directed to the primary element (e.g., the melody, which needs to be in the foreground, not an over-busy background or counterline).

Variety

The interest of the listener can be maintained by changing instrument combinations. Variety in harmonic elements can be obtained by using chord substitutions. Variety can also be obtained from variation of the style or the feel. A change from Latin to swing, for example, could be used within an arrangement.

> ✪Tip: Gordon Goodwin suggests that variety in dynamics increase the interest and movement.

Purpose

The arranger should consider many factors – What genre am I writing in? Who am I writing for? What are the technical levels of the players? Will the arrangement be used again? Will the instrumentation remain constant? How creative can I be? The answers to these questions can determine aspects of the arranging process.

Inspiration

Inspiration for the arranger can come from a number of sources. Listening is so important – listening to recordings and live performances. Listen not only to big bands but orchestral and chamber works. Listen to the great improvisers for melodic and harmonic sense because after all, Arranging is like improvising in slow motion. If you are inspired by a tune, this will make the next step a whole lot easier.

2.3 Tune Selection

The first step in arranging is selecting the right tune.

a. Select your tune from the standard repertoire or a Broadway tune. (Standards have been proven effective, through hundreds of arrangements for great recordings and live performances.) Pick one that you know well.

b. Select a tune in which there is room for expressing some ideas of your own.

c. Avoid extremes in tempo, rhythmic/harmonic complexities, etc., when first using any technique or concept. You can stretch out later.

2.4 Sheet Music, Fake Books, Real Books and Transcriptions

Sheet Music

Sheet music is the retail printed version of published music. Only the original sheet music version of a song is reliable to furnish the entire song intended by the composer.

In the sheet music of many older tunes, the chord symbols frequently disagree with the piano arrangement. If the chord symbol does not show a change of bass, then when the lead line is separated from the rest of the print, the changes will be wrong. This can be a problem with older fake books. For example, Em6 chord symbol shown while a C# exists in the Left Hand – the chord symbol should read C#m7b5.

Fake Books

Fake Books are volumes containing a wide selection of tunes, usually in the form of lead sheets or lead lines, extracted from the sheet music. Older fake books are illegal as no royalties are paid to the copyright owners. Often the chord changes need scrutiny.

Real Books

A Real Book is a fake book designed to appeal more to the jazz community.

Most of the lead sheets contained in these editions have changes that follow well-known recordings. Real Books have long been the staple for jazz musicians.

Transcriptions

Transcriptions are the best answer of all. By quickly transcribing a tune that you want to arrange, from a performance you enjoy hearing, you improve your ears and you know where the rhythms and chord changes came from.

> ✪Tip: "Transcribing is great for your ears. The more you do it, the better you get." Bill Broughton (McKenzie, 2006a)

2.5 Starting To Work

Learning at the Piano

Even if you are not a pianist, the keyboard is the best instrument on which to develop your tune. Writers who are not primarily keyboardists can soon develop reasonable 'arranger's piano chops' for use in writing.

While learning the tune, experiment with melody and changes separately. This is called "working the tune". The playback from a computer can also give the arranger a rough representation of how the tune is being worked but there are pitfalls.

Sketching

Sketching means that you write down some of the interesting ideas from early stages of experimentation. Write down the ideas that appeal to you, as they occur. Use 2-line systems (even if you are working only the melody), to make room for harmonic ideas that occur to you later. Keep your first sketches in a folder, together with the lead sheet.

Sketching should generate more material than you need. Save only the best material. As you become more fluent you will automatically pick up speed in the creative process. This is also true for musicians who write at computers.

The value in sketching first, then writing or computing, is one of efficiency. You cannot use every good idea you have. It is good to work out some of the early stages of developing an idea before deciding whether to continue with it. The sketching process will help you save time and energy.

> ✪ Q. How much time should I spend writing?
> A. How good a writer do you want to be?

Inexperienced arrangers would be foolish to write straight to a full big band score without sketching on a smaller scale first.

Chapter 3 - Basic analysis of compositions

3.1 Melody

Melody is the ingredient that establishes the identity of music. Melody is most responsible for the memorability and success of a tune. This is not to discount the importance of harmony and orchestration. Success in writing music, though, can be no greater than the writer's ability to handle melody. The art of writing and arranging melody begins with the analysis of great tunes.

Simple Analysis

Analysis of music is the study of its various elements. Musicians analyze music for the purpose of learning from the successes (and failures) of those that preceded them. Analysis here is kept simple, and limited to melody.

Structure

Structure describes the way a piece of music is held together. The most basic structural devices are phrases, cadences, developers, and musical form.

Phrases

A phrase is the shortest section of melody that feels complete. The most common phrase length is four bars. Four bar phrases combine into eight bar sections that are called double phrases or periods. A phrase normally ends with a longer note, or a more pronounced rest, before the melody proceeds. This break in motion (cadence) allows the music to breathe. *(Example 1)*

Periods (or double phrases) are the primary eight-bar building blocks for a standard length 32-bar tune. Formally, these periods are identified by letter names according to the simple song forms: AABA, ABAB, etc.

The pause (or breath) at the end of an 8-bar section will be more pronounced than the pause (or breath) at the end of its first 4-bar phrase.

If breathing is slighted (or inadequate), music will feel forced or busy. If pauses are too long or pronounced, though, melodic flow is damaged.

3.2 Cadences

Cadences are combinations of notes, chords, and rests that slow the movement of music, thus causing a sense of pause. Some cadences are shorter, some longer, depending on size or complexity of the music being sectioned. Cadences occur in harmony, melody, rhythm and texture. Here we deal only with harmonic and melodic cadences.

Harmonic Cadences

Harmonic cadences are chord progressions that slow or stop the feeling of forward movement in harmony. Cadences occur at the ends of phrases and periods. We use four harmonic cadences:

The half cadence uses a ii-V or IV-V progression. With the half cadence, the music pauses (and breathes) but moves on. Music following a half cadence will feel like a continuation of what went before. *(Example 2)*

The full cadence uses a V-I or vii-I progression. Movement stops when a full cadence is used. Material that follows a full cadence will feel like the beginning of a new section. *(Example 3)*

The modal cadence is a IV-I progression. The music pauses, but with a sound that is modal and somewhat bluesy. *(Example 4)*

The deceptive cadence moves not from V to I, but from V to VI. (In jazz application, a deceptive cadence may also move from IV to iii, V to iii and so on.) Harmonic motion feels as if it should turn around- deceptive describes the effect well. These cadences can be used to briefly postpone the use of a full cadence. *(Example 5)*

In Example 6, cadences in "Stella By Starlight" are identified and labeled. Play this example at the piano. Listen to how the cadences work.

Why are these things important? These cadences provide the great sense of motion felt in this old standard. The half cadences act normally, and do not give away the unusual progressions to unpredictable key centers. In this way, these normal ii-V cadences help keep the energy level high. The cadence at mid tune is predictable, thus lowering the energy appropriately. When arranging, be careful not to damage the energy flow.

Melodic Cadences

The melodic cadence is a break in the forward movement of the melody toward the end of a phrase or period With longer note values or rests. When the melodic and harmonic cadences occur separately, the music breathes but keep moving. When both cadences occur at the same time, the music stops.

Summary

Too many cadences keep music from moving ahead. Too few cadences prevent music from breathing. The choice and placement of cadences influences the success of most other decisions made by the writer.

Example 1 – Stella By Starlight – 4 Bar Phrases – 8 Bar Periods
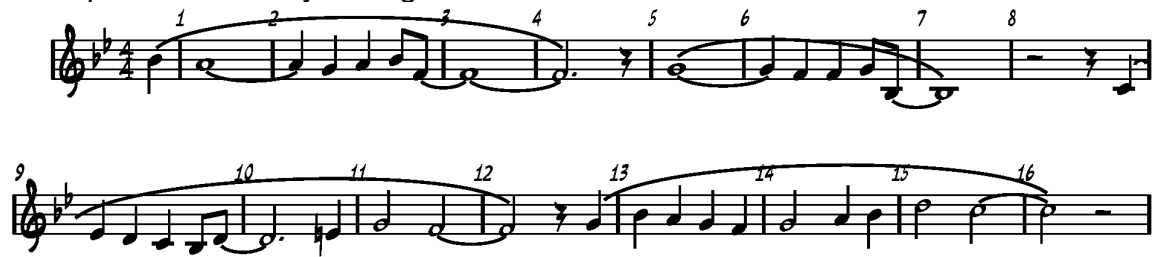
Example 2 – Half Cadence

Example 3 – Full Cadence
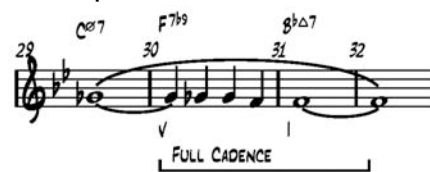
Example 4 – Modal Cadence
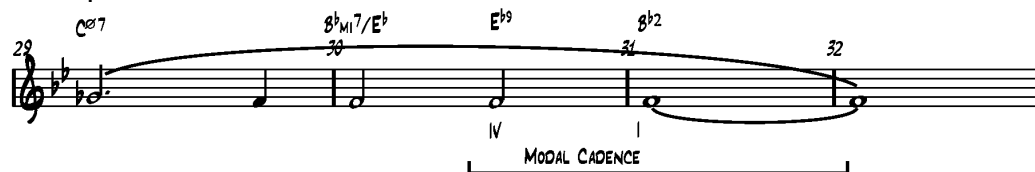
Example 5 – Deceptive Cadence

Example 6 – The Cadences of "Stella By Starlight"

3.3 Developers

Developers are the primary devices used to develop a fragment of melody, first, into a coherent phrase. Later these phrases develop into a full tune.

The most common developers are the repeat, sequence, answer and mirror.

A **repeat** is just that: the reuse of a figure, using most of the same notes. *(Example 7)*

The **sequence** is a repeat of the previous phrase or fragment, transposed up or down, usually by only a step. *(Example 8)*

When a fragment or phrase sequences up, the energy level escalates a little. When the transposition is larger than a step (either direction), the energy level jumps significantly.

The **answer** is a section of melody completing the thought from a previous phrase or period. The answer may be as short as a fragment, or as long as a full eight-bar period, all-depending on the material being answered.

The sense of movement, and the resulting rise in contour, are both stronger from an answer than from a repeat. *(Example 9)*

The **mirror** is a reuse of melodic material in which intervals are either inverted (mirrored) or reversed (retrograde). The mirror produces more tension than a simple repeat. *(Example 10)*

Augmentation and **diminution** are opposites. A melody is augmented when reused with doubled note values. Diminution occurs in reuse when note values are reduced (usually by 50%). Augmentation and diminution are valuable tools, but are not part of simple arranging.

3.4 Implied Harmony (and Musical Tension)

Every melody suggests a sense of harmony as it moves and all music has a level of tension. This basic concept is at the heart of Schenkerian analysis. Higher tension results from unexpected or opposing ideas. The composer/arranger builds and releases tension to create interest.

Harmony implied by a melody may or may not be the same harmony found in the chord progressions that come with the song. When the implied harmony agrees with the chord changes, tension is low. The effect is calm and consonant. (Good for beginnings and cadence areas in jazz and pop music, and for music needing a simple, childlike quality.) When the implied harmony differs from the changes, tension increases and the energy level (and interest) goes up. (Good for contemporary jazz, even for developing the phrase structures in music requiring lower tension levels.) *(Example 11)*

Example 7 – "The Girl From Ipanema" (note when the melody fragment repeats, the chords change)

Example 8 – How Insensitive (first period is sequenced a step lower)

Example 9 – Stella By Starlight

Example 10 – Mirror (Melodic motion from bar 1 into bar 2 is inverted for bar 3 into bar 4. The use of different rhythms adds interest, and doesn't damage the mirror.

Example 11- the implied harmony of the melody agrees with the changes in bars 1 and 2; the resulting tension level is low. They begin to differ in bars 3 and 4, resulting in a rise in tension.
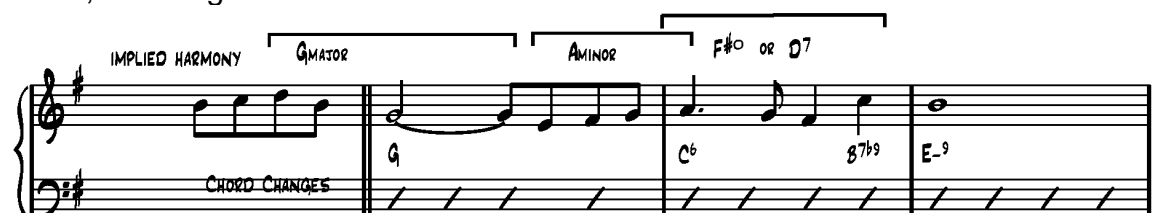
Implied harmony is expressed through:

Stepwise movement. Beginning on or approaching a strong beat. Identify the scale - it becomes the implied harmony for that area of melody. *(Example 12)*

An arpeggio. Analysis is made according to any position of the chord: root or inversion. *(Example 13)*

Appoggiaturas and escape notes. The outer two of three notes will suggest a chord. *(Example 14)*

Any of the above, when out of sequence or obscured by too many notes. Too many stepwise notes obscure the analysis. Find repetitions or a single leap and analyze accordingly. *(Example 15)*

Application

In jazz, agreement between implied harmony and the actual changes is usually not a good idea as tension levels are too low. Use substitutions to move the bass line around a little. This will then increase the tension levels.

3.5 Melodic Character

A melody line is said to be either active or static.

Active describes a melody made up of skips and/or sudden changes of register. An active melody moves better in unisons (or octaves) than when voiced in a chordal fashion. *(Example 16)*

NOTE: Rhythmic complexity alone does not classify a melody as active. Leaps, abrupt changes of register, etc., must also occur.

Static is the opposite of active. A static tune (or a portion of the tune) is one in which the movement is mostly stepwise, and/or sustained. Voicings are more appropriate on a static melody than on one with more activity. *(Example 17)*

However, a static tune can also sound good with unisons, when played by colour unison, preferably in the lower ranges. *(Listen to the CD example - "Black Orpheus")*

Assignment

Analyze the melodic structure (developers), cadences and implied harmony of "Dolphin Dance" by Herbie Hancock. This may be found in the *Real Book* vol.1.

Example 12 – Stepwise motion
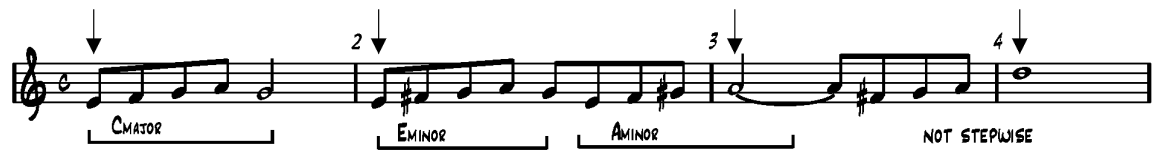
Example 13 – Arpeggio

Example 14 – Appoggiatura/ Escape note

Example 15 – Obscured sequence

Example 16 - "In Case You Missed It" (by Bobby Watson, rec. by Art Blakey & the Jazz Messengers)

Example 17 – "You Don't Know What Love Is" (by De Paul & Raye, rec. by Art Blakey & the Jazz Messengers)

Dolphin Dance

Herbie Hancock

Chapter 4 - Melodic Rhythm, Harmonic Analysis and Harmonic Colour.

4.1 Adapting a Melody

Adapting a melody is the simplest form of arranging, and involves only four steps:

1. Determine the style in which the tune should be played.
2. Select the best key for the circumstances.
3. Make simple adjustments to the melodic rhythm (if needed) to put it into the desired style.
4. Copy (or print) the material accurately for the performers. (Transposed, if transposing instruments are to be involved.)

When adapting is all that the arranger needs to do, it may be accomplished in a matter of minutes. The tune need not be altered at all, and will only be played once. When the project calls for an arrangement that is more involved, the arranger should still begin with these same three steps.

4.2 Key Selection

Place the range of the tune (distance from top to bottom notes) within the average playing range of your lead (top) instrument (usually a front-line horn). *(Example 18)*

If there is room within the span of the tune, locate the tune closer to the bottom of the average playing range if the lead is a higher horn (trumpet, alto sax, etc.). Locate the tune closer to the top of the average playing range if the lead is a lower horn (tenor sax, trombone, etc.). Then choose the key that makes this possible.

Brass and sax players are most experienced playing in keys ranging from one sharp to five flats (concert pitch). Therefore, when the choice of concert key is between, say, Bb Major and B Major, the ensemble is most likely to play its best in Bb Major. Arrangements for vocalists are a different story and will be discussed later.

> ✪Tip: **"**If the singer wants it in Ab, use the computer 'cause it will end up in G, A, Bb, or B" – John LaBarbera

4.3 Adjusting the Melodic Rhythm

If your style will be jazz (swing), analyze the melody for its rhythmic placement. If too many strong notes fall on the beat, then move some of them off the beat, thus providing a looser relationship between melody and accompaniment (bass line). The process of moving notes to unaccented beats is called syncopation. *(Example 19)*

Syncopation is a key element in the melodic style of jazz and jazz-related music. The decision of how much to syncopate a melody is influenced by the amount of motion in the accompaniment. When music is felt in 2 (a 2-feel) fewer syncopations are needed than when felt in 4 (a 4-feel).

Too many consecutive anticipations may feel forced or predictable. Try mixing up anticipated syncopations with delayed syncopations and even on the beat notes.

4.4 Analysing The Changes

Fundamental Bass

Fundamental bass is a series of notes written to show the bottom notes from a set of chord changes. One note is sustained for each chord, no matter how long it may last. (Fundamental bass is not intended for performance by the bass player, but is an analytical tool for the arranger.) Fundamental bass simplifies the analysis of the Two-part structure. This type of analysis is derived from Schenkerian analysis.

Two-part structure

Music with melody and harmony will always have at least two parts moving. Melody is thought of as Part 1 and harmony (in this case the fundamental bass) as Part 2. These two lines have a contrapuntal relationship to each other. That is, they move together but are not allowed to become tied to each other except at cadence points, where forward movement is supposed to slow down.

The intervals between the fundamental bass and melody are strategically important: 2^{nds}, 9^{ths}, 7^{ths}, are more aggressive than 3^{rds}, 5^{ths} and 6^{ths}, and create a higher interest level, 5^{ths} and 8ves are less energetic, and are most useful at beginnings and cadence areas. In more aggressive tunes, they are avoided.

In Example 20, the chords in bar 2 created 5^{ths} between the parts. Chord substitutions changed the 5^{ths} to 3^{rds} for a different sound. *(Example 20)*

4.5 Common Colouring Devices

The level of harmonic colour in jazz is higher than in most other popular styles. For most purposes, major and minor triads, major 6th chords, and straight dominant seventh chords are too plain.

1. **Extensions** are the notes added to chords or harmonies from the scale most representative of the chord. C or C7 is plain, Cmaj7, C13 are extended. Extensions were used by composers such as Debussy.

2. **Suspensions**, or sus-chords, are the result of putting the 4th into a dominant chord and removing the 3rd. For example, C7sus4 or Bbmaj/C.

3. **Alterations** are chromatic changes made to chords. The most common alterations involve the 5th and 9th scale degrees. While even a triad maybe altered this way, alterations usually take over after the chord has already been extended. For example, C+7b9.

4. **Change-bass** describes the chord whose bass note is not its own root. Change-bass range from the common inversion to the hybrid chord (whose bass note is outside the chord's own key centre). For example, D/Eb.

Determining when to use more colourful chords

When a tune is relatively diatonic (even an aggressive jazz tune), especially if the tempo is high, then the quality of chords used in the changes can remain simple. 9ths, 13th, sus chords, etc. are adequate. *(Example 21)*

When a jazz tune needs to tell a more modal story, has a slower tempo, or contains a greater number of accidentals, then the quality of chords should be more colourful.

In-class Analysis – "Stella By Starlight"

Example 22 is the lead sheet for "Stella by Starlight" with the original Real Book chord changes and the chord changes used in the recording by Wayne Shorter. Note the use of many common colouring devices. In particular, bars 1, 12 and 14 use an altered dominant seventh chord. A suspension is used on the chord in bar 5 (by using an Abm/Bb instead of Bb7) and bar 8. In bar 17 a change bass device is used (using a tritone) along with a suspension. Note also the use of a pedal point (to be discussed later) from bars 10 to 14.

Example 18 – Range of "Have You Met Miss Jones" (Rodgers & Hart) in F major (last 8 bars)

Example 19 – "Just Friends" (Klenner & Lewis) – sheet music rhythm vs. adjusted swing rhythms

Example 20 – "Have You Met Miss Jones" – two part structure and chord substitutes.

Example 21 –"Black Nile" (Wayne Shorter)

Example 22 –"Stella By Starlight" as recorded by Wayne Shorter

Chapter 5 - Reharmonization, Chord Substitution and Melodic Development.

5.1 Reharmonization 1 - Chord Substitution

Reharmonization is the process of conforming a set of chord changes to the requirements of an arrangement. Normally, two items receive the closest scrutiny: level of harmonic colour, and the 2-part relationships (fundamental bass against melody). The adjustment of colour level involves the extensions, alterations, etc. Adjustments in the 2-part structure involve chord substitution.

Chord Substitution

The **substitute** is a chord, which provides the same kind of harmony or function as the chord, which it replaces.

Chord substitutes are used for one of two reasons:

1. The fundamental bass may cause an unwanted interval against the melody. The use of a primary chord substitute will change the fundamental bass, thereby altering the two-part structure of the tune. The basic harmony remains unaltered.

2. The arranger may just want a different sound. The original may be too bland, or it may even be too aggressive and need taming somewhat. The arranger may want a particular modal sound to prevail.

Common Substitutes (primary and secondary) are built over bass notes a third or fifth above or below the original note.

1. A primary substitute is based a third away from the original chord; they have two notes in common.

2. The secondary substitute has only one note in common with the original, and is based a fifth away, up or down. The energy level of a secondary substitute is higher than that of a primary.

Locating the Substitutes

Major and minor chords: Locate the new bass note and select the right chord over it. The number of common tones between the substitute and original will influence the energy level in the music. There are more minor scales than major, so there are more choices of substitutes for minor chords. *(Example 23)*

Dominant chords: Locate the tritone (#4 or b5) and build another dominant (or a diminished 7th chord) containing the same tritone. The tritone substitution

is based an augmented 4th or diminished 5th away and contains the same tritone as the original. *(Example 24)*
Tritones were used by Bach, Mozart and Schubert.

> ✪Tip: A tritone substitution should make the melody note a more interesting note. Don't use it if it makes the melody note less interesting!

In-class analysis - "Autumn Leaves"

Example 25 is a simple reharmonization of "Autumn Leaves". There are some weaknesses with the original Real Book chord changes if the arranger wants more harmonic colour.
Bars 3 and 15 have long triads on strong beats. The solution is to extend or add to the longer triads. Bars 6,10 and 26 have too many straight dominants, which can be improved by substituting suspension chords and tritone substitutions.
Bar 17 contains octaves in the 2-part structure. The solution is to substitute a change-bass chord creating a minor suspended 4th chord. Bars 15 and 16 are bland, so the Em is extended to create new line. In bar 21, there are octaves in 2-Part structure, which can be improved by substituting to a simple inversion. A tritone substitution is used in the next bar. In the last four bars of the tune, the final cadence too long. A simple substitution is used in bar 29; the V chord (B7) is extended and then delayed by using a C in the bass, which alters the harmonic rhythm of the cadence. Finally, the last chord is extended. *(Example 25)*

Final Balance

It is important that the 2-part scheme (melody and bass/changes) is well balanced. That is, the harmonization can be as crafty as one is able, but the changes must remain subordinate to the melody.

The following should be true:

1. The chord changes must flow well. There can be no sudden changes or surprises, regardless of how advanced the substitute chords. Unless, of course, the sudden surprise is also present in the original composer's chord changes.

2. The chord changes must support the melody, and not compete. That is, the amount of colour or alteration in the chord changes should never be greater than the amount of colour or interval energy in the melody itself.

3. The changes must flow with the same scheme as the song form. That is, the rise in interest levels caused by substitutions etc. should progress with the form, and not contrary to the form scheme.

Guidelines for using substitute chords

1. Play and analyse the tune. Identify the cadences or chord changes that should not be altered, i.e. those that are characteristic of the tune itself. For example, the first four bars of "My Funny Valentine" have a characteristic descending line in the harmony (either in the bass or above). Be careful of changing this characteristic. "For Once in My Life" also has a characteristic progression.

2. Analyse the original chord changes against the 2-part structure of the tune. Locate inaccurate or awkward chords from this standpoint.

3. Choose substitutions to correct the problems in #2.

4. Choose substitutions also to adjust the level of harmonic colour (up or down) as needed.

5. Start with 1st-level substitutions when the tune has a diatonic or gentle quality to it. Move to 2nd-level or change-bass substitutions to provide more harmonic interest, or to keep the changes from being predictable.

6. Don't oversubstitute!

5.2 Keynotes

The **Keynotes** of a tune are the notes that form the structure on which the tune is built. All good tunes may be reduced to the outline of their keynotes.

In much of the standard repertoire, the strong interval relationships of 2nd, 3rd, 7th, 9th, etc. connects the keynotes and the fundamental bass. Intervals of 5th and 8ve are weaker, more commonly found in cadence areas, where the energy levels drop anyway, and in modal or pentatonic music, where a lower energy level is idiomatically correct.
Keynotes provide a structure around which the writer can add or change melodic material without compromising the tune.

An excerpt of Bach's French Suite No.2, Menuet is shown in Example 26. The lower stave is the melody reduced to its keynotes. *(Example 26)*

Keynotes alone are found in Example 27 for "Just Friends". The Real Book chord changes appear above the tune. Fundamental bass notes appear below, on the bass staff. Notice how much easier it is to visualize the reharmonization, when only the keynotes are present. It becomes much easier to concentrate on the interval relationships between the melody (keynote) and the fundamental bass. *(Example 27)*

Example 23 – Primary Substitutes for Major and Minor Chords

Example 24 – Subs for Dominant 7th chords

Example 25 – "Autumn Leaves" (Kozma/Mercer)– simple reharmonization.

Example 26 Melody and Key Notes for *French Suite No.2, Menuet* (Bach)

Example 27 Key Notes for "Just Friends"

5.3 Melodic Development

In most arrangements, the original melody is developed in some way. No tune has been written that fits every style without adjustment of some variety.

Development occurs when a melody is treated one of three ways:

1) The rhythm of a melody may be changed for the sake of style.
2) Notes may be added to the melody.
3) The melody itself may be changed.

Adding Notes To The Melody

A melody line may need to have additional notes (or rhythms) added when the tempo increases or when the style is more rhythmic (Latin, funk, etc.). When this occurs, the keynote structure itself should not be altered. Adding notes to a melody is made easy through the use of non-harmonic shapes (or notes), so named after 17th century non-harmonic notes. Added notes do not disrupt a tune when they maintain a stepwise relationship to the original. This is the logic of non-harmonic shapes.

Nowadays, we don't think of "non-harmonics" as dissonant. It is the shapes of these devices that are important. By adding notes according to these shapes, we leave the basic message of a melody intact.

The Non-Harmonic Shapes Most Common To Jazz.

Adding notes to a melody increases its interest at different levels.

1st Level: Embellishing the Melody. (Lowest level of increase)

Adding notes provides a lift in the energy level of a phrase. When the added notes conform to non-harmonic patterns, they act like embellishments. The choice of embellishment depends on the selection of horns (or leads). Different instruments sound best on different embellishments. *(Example 28)*

There are several reasons to add notes, such as ending a section of melody whose contour is already raised. *(Example 29)*

Adding notes to combine two four bar phrases creates one eight bar phrase. *(Example 30)*

Develop the second phrase by adding a note or two. The second phrase then provides the complex' part of a **Simple to Complex** pattern lasting 8 bars. *(Example 31)*

Adding notes increases the activity to provide a strong boost in energy level at the end of a section. (Add some arpeggiation to the non-harmonic shapes.) The broken chords facilitate the rise in melodic activity. *(Example 32)*

2nd level: adding notes to the keynote structure

When the energy level has already been raised (faster tempo, change of key, etc.), the melodic development must be more flamboyant to be effective. The success of adding to a melody at a higher energy level depends upon moving farther away from the tune, but without altering the keynotes. *(Example 33)*

At a still higher energy level, broken chords added to the keynote structure may outline the extensions (and/or alterations) found in the chord changes. (These new notes may be added before or after a keynote.) The resulting melody begins to sound like a new tune, so it must also be developed through the use of repeats, answers, sequences and other such devices. *(Example 34a)*

There are also two common jazz embellishments may be simply notated with symbols. These are decorative symbols or ornaments. The turn is very effective when a whole section perform the turn together. *(Example 34b)*

3rd level: compositional

The melody itself may be changed for a few bars.

In the arrangement of an AABA tune, development of the first two A sections may be so complete that a third use (after the bridge) would be detrimental. In this case, new material should be written to replace the first four bars of the 3rd A section. From that point, at least bar five of the original tune should be used before the tune is allowed to cadence.

This new material should contrast the original, but remain true to the keynotes. In Example 35, bars 1-4 of the last eight bars are replaced with a more aggressive melody written around the keynotes, and even using the tune itself. *(Example 35)*

Example 28 – "Just Friends" - Embellishing by adding notes

Example 29 – "Just Friends" – original, adjusted and additions

Example 30 – "Just Friends" -Add notes to combine two 4 bar phrases

Example 31 – "Just Friends" -Simple to Complex pattern

Example 32 – "Just Friends" - Add Arpeggiation to Non-Harmonic Shapes

Example 33 – Keynotes at start of "Just Friends" – added notes anchored to keynotes

Example 34a – "Just Friends" - New Harmonic shapes and broken chords added to keynotes

Example 34b – "Just Friends" - the Turn and Glissando

Example 35 – "You Don't Know What Love Is" Last A section. (Rec. by Art Blakey & the Jazz Messengers)

Summary

Development of an existing melody by adding or deleting notes should not alter the keynote structure of the tune. Different developmental techniques increase the energy levels of the tune in different amounts. More aggressive development should be saved for later in the arrangement, when the rhythm or harmonic energy is also on the rise.

5.4 Trimming the Melody, Breathing, Counterpoint and Pedal Point

Shortening the Length of Sustained Notes.

By shortening the length of a sustained note, you open up the texture and allow the melody to breathe. Experiment with this kind of trim on a cadence. The background may be looser that way, and the music more transparent. Note that in Example 36 the first long note is not trimmed, that would break up the structure of a phrase. *(Example 36)*

Omitting Notes

Notes may be left out altogether. This device is used either at the cadence or the beginning of a phrase, but not in the middle. By omitting a note or two, or even a whole fragment, you raise the contour by capturing the immediate attention of the listener. This is a more advanced technique, and is easy to overuse. In Example 37 the first 8 bars of "Secret Love" are shown, then the Bb-note is omitted from bar 5. *(Example 37)*

Breathing

A well-written melody has a breathing quality to it. This is not referring to the breathing requirements of wind instrument players but is true of any instrument. The more highly developed a melody, the more important the breathing quality becomes to the success of the arrangement. Example 38 is a melody that breathes well and Example 39 does not. *(Examples 38 & 39 and CD audio)*

Contrapuntal Lines

Adding a second line against the melody can enhance the overall arrangement. Counterpoint is simply the act of moving one line against another.

For the counterpoint to be effective, and non-competitive, the second line must be subordinate to the first. That is, the first line must remain the primary melody; the second (added) line must move well against it, but remain a secondary line.

Good secondary lines have two characteristics in common:

1. Their rests or sustained notes are a little too long; they breathe too well.

2. A note or rhythm is reused a little too much for the line to sound good as a primary melody. In low energy settings, the note is in the middle or at the bottom; in higher energy settings, this note can be the upper threshold. *(Example 40)*

Counterpoint is most effective when the lines don't touch each other. That is, the important notes in the secondary melody should not walk across or double the important notes in the primary melody. *(Example 41)*

Contrapuntal Bass Lines

Bass lines can become part of the contrapuntal structure as well. An active bass can fit well against a powerful melody. For this technique to be effective, more than just the bass guitar must be assigned to the bottom line. A synthesizer and, perhaps, a low brass or reed instrument together can balance the energy level required. *(Example 42)*

Pedal Point

Pedal point is a held or repeated note placed below a series of moving chords and is most useful to jazz and popular music in two ways:

1. As an approach to a major cadence, to signal the closing of a section. The pedal in this case is usually the IV or the V, if the cadence is normal. Such a pedal point justifies progressions that under other circumstances would not sound appropriate so close to a cadence area. *(Example 43)*

2. At the beginning of a section of music, pedal point can hold unusual changes together, and also help to punctuate progression of the form itself. *(Example 44)*

5.5 Reharmonization 2 - Levels Of Colour, Adding Chords

There is a level of harmonic colour just right for any chart. When the level is too low, the product will sound boring or naive; with too much colour, most any chart will be overbearing and not enjoyable to hear or to perform.

Jazz harmony is normally more colourful and diverse than harmony used in other areas of popular music. Harmonic colour is present (to varying degrees)

Example 36 – "Just Friends" adjusted then trimmed

Example 37 – "Secret Love" (rec. by Ashley Alexander, arranged by Frank Mantooth)

Example 38 – "Just Friends" - This melody breathes
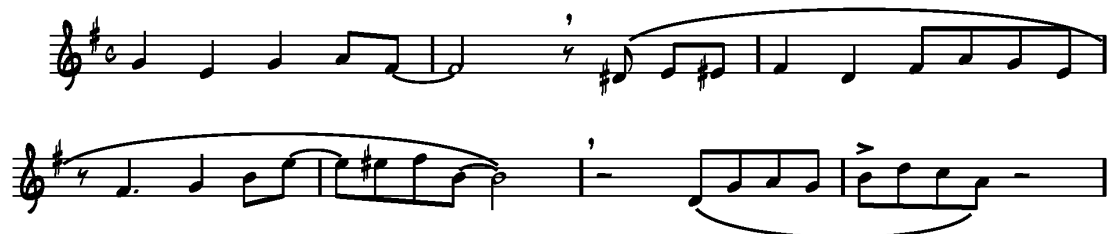
Example 39 – "Just Friends" -This melody does not breathe.

Example 40 – "My Funny Valentine" (Rodgers & Hart)

Example 41 – "My Funny Valentine": Good vs. Faulty Counterpoint

Example 42 – "Still Workin' It" (Daryl McKenzie) - Contrapuntal bass line.

Example 43 – Pedal Point

Example 44 – Pedal point applied to "Skylark" (Carmichael & Mercer)

in all tunes: notes and chords borrowed from other keys raise the level of harmonic colour in all styles. Even the common chord extensions (discussed previously) help to create a richer harmonic fabric.

In-class analysis – "Skylark" (Carmichael & Mercer) as recorded by Art Blakey and the Jazz Messengers.

In contemporary use, "Skylark" *(Example 45)* is an example of a tune that requires more harmonic colour. Enhancement of "Skylark" involves chord substitution (discussed previously) and pedal point.

Problems With Original Changes to Skylark:

1. **Beginning**: The chord changes are outdated, due to a combination of the first major 6th chord, and the stepwise progression in bars 1 and 2. The changes need help.

Solution: The Ab chord (bar 4) becomes a **target chord**, and is approached by borrowed ii-V progressions built over an appoggiatura. The success of substitute changes is measured by their ability to progress effectively to a designated target.
New chord changes for bars 1 and 2 were placed over a Bb **pedal point**, providing a better interval relationship between melody and bass.

Note also the interesting sound from bar 2 into bar 3 due to the **colour shift**.

The Colour Shift is another important tool in contemporary harmonization. Unexpected movement across a bar line from a flats key centre to a sharps key centre releases a significant amount of musical energy. Movement across from the sound of three flats (Eb and Bb7) to the sound of two sharps (Em7 and A7) is exciting, and attracts immediate attention. Clever use of the colour shift enhances a set of jazz changes more quickly than almost any other harmonic technique available to the contemporary arranger but should not be overused.

2. **The bridge**: Original chord changes were kept in the first 4 bars of the bridge. Note the several ii-V chord movements in the bridge: a gentle and consonant melody at slow tempo requires some activity in the fundamental bass.

5.6 Adding Chords To The Changes

Even the best changes may not have enough harmonic motion to satisfy special needs in an arrangement. When this is the case, additional chords may be added without changing the message or flow of the changes.

Example 45 – "Skylark" (Hoagy Charmichael)

1st level of development: Above each fundamental bass note write a ii-V progression that would resolve to the next bass note. Stop the melodic motion briefly when the tonic bass occurs. This produces a harmonic cadence at the same time as the melody, satisfying the requirements of a major cadence. *(Example 46)*

2nd level of development: Add new bass notes to the fundamental bass. The selection of notes and chords is made from non-harmonic shapes (passing or leading tones, auxiliaries, appoggiatura or escape notes) added to the fundamental bass. Above the new bass notes, put changes that move the way you like. Providing these added bass note(s) appear in non-harmonic shapes, the chords built over them will enhance, not alter, the sound of the changes.

Example 47 uses the shape of an appoggiatura *(Example 47).*

Example 48 uses the escape tone shape instead. *(Example 48)*

In Example 49 ("Beautiful Love"), the bass line cannot support harmonies on each note in the melody without repeating the same chord over and over. However, a note or two added to the fundamental bass can provide the foundation for additional chords. *(Example 49)*

You can effectively use additional chord(s):

1. When a cadence needs more motion.

2. When the changes go by too slowly to balance a colourful melody

When a cadence needs more motion:

Increase the harmonic motion by adding additional ii-V movement. This addition can occur while the melody is still moving, or, when the melody itself cadences. *(Example 50)*

When the changes go by too slowly to balance a colourful melody:

Add chords to a new non-harmonic bass line. The new non-harmonic bass line will enable some new chordal sounds; therefore, it should not depart unnecessarily from the original key centre. By using a variety of chord types, the new changes do not become predicable. At a reasonable tempo, fewer add-chords are needed. At a slower tempo, the need for adding chords is greater. *(Example 51)*

Example 46 – "Have You Met Miss Jones" - ii-V Progressions over slow fundamental bass notes

Example 47 – "Have You Met Miss Jones" - adding new notes to the fundamental bass – Appoggiatura shape.

Example 48 – "Have You Met Miss Jones" - adding new notes to the fundamental bass – Passing Tone and Escape Tone shapes.

Example 49 – "Beautiful Love" (Victor Young) – Original and with additions

Example 50 – "Black Orpheus (Manha De Carnaval)" (Bonfa & Antonio)

Other additions to the changes (non harmonic shapes)

1. **One shape at a time.** Between two fundamentals, create a new progression by adding a third bass note, using a **non-harmonic shape** to locate the added note. Then harmonize the new bass note to the melody note(s) above it. *(Example 52)*

2. **Shifting chord patterns over simple bass line.** Over a simple bass pattern, add stepwise chord patterns to form inversions and hybrid chords against the bass. In Example 53, the primary C and Cm7 chords remain intact; the non-harmonic shape of the new patterns will license almost anything that sounds good to you. Let your ears decide. *(Example 53)*

3. **Add-chord** is the process of increasing the harmonic motion of changes by adding new chords via new bass notes, which are non-harmonic to the original fundamental bass. By adding this way, the harmonic motion is increased, but the original feel of the changes remains unchanged. This is particularly true if the resulting bass movement is an ascending or descending line that forms a type of counter melody. *(Example 54)*

In-class Analysis – First 4 bars of "Stella by Starlight".

A problem exists in "Stella by Starlight" *(Example 55).* If voicings were required for each note of this melody, the same chord would be repeated over and over.

Solution: Add chords by adding new bass notes wherever additional chords are needed. The new bass notes should be added via one or more common non-harmonic shapes. *(Example 56)*

Then, harmonize the new bass notes. Don't use the same chord as you are moving away from. Let your ear guide you in choosing an appropriate chord. If you get too far away from the changes, your ear will tell you that the add-chord is disruptive. *(Example 57)*

Then, check the melody against your developed changes. Adjust the melody or harmony as needed for balance. If a conflict is too great, try another shape or forget it.

✪Tip: Don't force a melody to accept any harmonic technique against its grain.

Example 51 – "Yesterdays" (Jerome Kern) - Original, a reasonable tempo, and a slower tempo

Example 52 –"Just Friends" Appoggiatura and Neighbor Shapes

Example 53 - "Just Friends" – Shifting chord pattern over simple bass line.

Example 54 - "All the Way" – Cedar Walton's reharmonization using a descending bass line.

Example 55 – "Stella By Starlight".

Example 56 – "Stella By Starlight" with new bass notes.

Example 57 – "Stella By Starlight" reharmonized.

Discussion - Chord Substitution Exercise

The following exercise illustrates how a melody note can be harmonized with any bass note if the arranger tries hard enough. The original is shown first arriving on a temporary tonic chord of F major. Then all other eleven possibilities are shown. It also demonstrates how the arrival of the tonic chord can be delayed. Play through these examples and listen to which ones are more successful than others. Some appear simple and others appear forced. Sometimes a simple substitution works better than a 'Coltrane' substitution.

5.7 Reharmonizing a I chord when the melody is the tonic.

When the melody note is the root of a I chord, there are few options to extend the chord to add harmonic colour (a major 7th won't work and the 6th sounds dated). One option is to move the chord up a half step so that the melody note now becomes the major 7th. This works particularly well at a final full cadence. (Examples 58, 59, 60 & 61)

If the melody note is the 5th of the I chord, this process still works, as the melody note will become the #11 of the new chord. *(Example 62)*

Another option is the use of a bVIIsus chord as a substitute for the tonic. *(Example 63)*

Example 58 "Surrey With A Fringe On Top" -Original and then Kenny Barron's reharmonization.

Example 59 "On the Sunny Side of the Street" -Original and then Kenny Barron's reharmonization.

Example 60 "My Foolish Heart" reharmonized by Bobby Hutcherson

Example 61 "Have You Met Miss Jones" reharmonized by Kenny Garrett

Example 62 "Stella by Starlight" reharmonized by Mark Levine.

Example 63 "All The Things You Are" reharmonized by Mark Levine.

Chapter 6 – Scoring for the Rhythm Section

The rhythm section in either the small jazz ensemble or the big band, usually consists of the following instruments:

Piano - acoustic or electric.
Guitar (often an optional instrument) – usually electric.
Bass – acoustic (double bass) or electric (bass guitar).
Drums (drum kit).
Percussion (an optional instrument usually only used in large ensembles).

The methods for scoring these instruments can vary between ensemble sizes and there are many different scoring conventions found historically, idiomatically and geographically. As a rule, rhythm section parts should act as a guide where freedom is allowed and contain all the necessary information when more specific elements are required.

6.1 The Piano

The piano is either written on two staves, treble and bass clef (non-transposing) or a single stave. You may either write out a fully notated part or simply a guide part, which allows the player more freedom.

It is acceptable in many styles, to give the pianist chord symbols and an indication of the style by writing the name of the style (e.g., swing, bossa, ballad etc.) at the top of the chart. Alternatively, a rhythmic figure in the first bar (or two bars for a two-bar pattern) may be written with the indication "sim." (for similar).

Some arrangers believe that when giving a piano player chord symbols, the part should also have the bass part in the left hand. This does not necessarily mean that the bass part should be played, but so the pianist has an indication of what the bass player will play. In that way they will be able to voice their chords without clashes. If you spell your chord symbols correctly, the notes that the bass player plays will be identifiable in the chord symbol itself. In writing vocal charts, vocal cues should be given to the pianist (essential with rubato passages or colla voce parts). Other cues can be given that might be useful such as instrumental figures.

The piano can be used as a unison double with other instruments, such as woodwinds, to give colour. The classic George Shearing sound uses piano with guitar and vibes as a colour.

The Synthesizer

The Synthesizer's use in arranging can depend on your own knowledge of producing sounds. If you intend to use synths., it's best to learn how to program them or hire a knowledgeable programmer. Sounds such as electric

piano, organ, strings or lead sounds are all useful to the arranger if available. Some older arrangements such as Ralph Carmichael's arrangement of "Angels We have Heard On High" for the Stan Kenton Orchestra use Celeste. This could be

> ✪Tip: Syhthesizers are a poor substitute for a real instrument – they lack the emotional quality and human touch.

played on synth. In many commercial uses the synth. parts may come from a computer in conjunction with a sequence.

6.2 The Guitar

The guitar sounds an octave lower than written and is written in the treble clef. It can be used as either an accompanying instrument or as a lead voice. In many small ensembles and some big bands, the guitar may not be included in the instrumentation. Any important guitar parts should be cued in the piano part for that reason. In older swing styles, "chopping wood" gives a strong pulse and is felt rather than heard.

It is very rare for an arranger to write fully notated guitar parts, as many keyboard voicings are unplayable on a guitar. Guitar parts usually consist of chord symbols with a rhythmic guide, as with piano.

The acoustic guitar (nylon or steel string) is dynamically limited unless it is miked, but the electric guitar is versatile, especially with effects such as wah-wah, distortion, phaser, flanger, etc. Apart from wah-wah, which can be used rhythmically, most effects are used for lead playing at the player's discretion. The guitar can blend with other instruments, depending on the player's chosen sound. Many playing effects are possible, such as bending notes upwards by pushing the string across the frets. Harmonics that have a pure bell like quality, are played by lightly touching the string with the left hand.

6.3 The Bass

The double bass and electric bass guitar sound an octave lower than written and are written in bass clef.

The double bass, used primarily in jazz, is usually played pizzicato (no need to indicate pizz.), though arco is sometimes used in ballads. It is rarely used in pop music where bass parts are played on electric bass.

The bass guitar is tuned the same way as the double bass and some players have a lower 5th string tuned to B. The fretless bass, which is capable of glissandi and expressive vibrato, is sometimes available. Modern techniques involving slapping or tapping are left to the discretion of the performer.

Bass parts, as with guitar parts, may consist purely of chord symbols and a rhythmic guide. As with piano parts, you could notate the first bar and then

give chord symbols with the indication "sim." Many arrangers include both chord symbols and notated parts to allow the bass player choice.

Walking Bass (4 feel)

This is a style used in jazz, but is occasionally used in other styles. It consists of a mixture of scales and arpeggios played in quarter notes (crotchets). A good rule is to have the root (or other note implied by the inversion) on the first note of each chord. You can include 8th note or triplet fills but these are best left to the player's discretion.

Two feel (2 in a bar)

Two feel means half notes (minims) in common time, often alternating roots and fifths. Note choices will depend on where the next chord is heading. As with the four feel, extra notes can be added to the part at the player's discretion.

A four feel will have more forward motion than a two feel. It is common to start a tune with a two feel and progress to a four feel as the tune develops.

6.4 The Drums (Drum Kit)

A conventional drum kit consists of:

- A bass drum (or kick drum) played with a foot pedal
- A pair of hi hat cymbals played by a foot pedal
- A snare drum
- A floor tom and one or more smaller toms
- A ride cymbal (a single large cymbal)
- Various other cymbals (crash, splash etc.) for accents and effects
- A stool on which the drummer sits

Sticks are normally used unless indicated otherwise. Mallets have a softer ringing effect and are useful on ballads and for cymbal rolls. Brushes have a swishing effect and are good for jazz ballads and soft swing passages.
In pop music, the bass drum part often emulates the bass part. In swing music, the bass drum is usually reserved for accents and not for playing 4 to the bar as it masks the tone of the double bass.

The snare drum has a set of snares stretched across the lower head giving a rattling, crisp sound. The snares can be turned off which produces a tom like sound. A loud accent, known as a rim-shot, can be produced by simultaneously hitting the drumhead with the tip of the stick and the rim with the side of the stick. By placing the end of the stick on the drum head and tapping the rim with the side of the stick, a clicking effect called "sidestick" can be achieved. It is often used in bossas to emulate the clave but can also be used as a soft backbeat in quiet passages in jazz or rock.

The high hat and ride cymbals are not usually played simultaneously (though sometimes the foot pedal of the high hat is used during a ride rhythm) and usually play a steady 8th (quaver) or 16th note (semiquaver) rhythm. The high hat can be opened by the foot pedal (indicated o or closed +).

> ✪Tip: "I write a map and say, "have fun". The drummer knows that he has to be the best listener in the band" – Bill Broughton.

Crash cymbals will often mark accents or the beginning of a section or to support an ensemble accent.

Toms are used effectively in fills or can be played rhythmically. Fills can be notated using slash marks and the word "fill". It is rare to notate fills.

The drums are written in the percussion clef or more traditionally, in the bass clef. There are numerous conventions used but the most common one is shown in example. Variations are possible as long as you indicate which drum is to be played and remain consistent.

Drum parts can cause more problems than any other rhythm section part as the arranger has to decide whether to allow the drummer freedom and keep the part simple. If the part is too complex, the result may be that the drummer is so busy deciphering it that their feel suffers. Most Latin rhythms

> ✪Tip: "I write a map and say, "have fun". The drummer knows that he has to be the best listener in the band" – Bill Broughton.

can be indicated by notating their name and a simple first bar followed by repeat (bis) bars. Good drummers with good ears will embellish a simple part to fit an arrangement, but it is essential to give cues such as brass stabs or phrases. This is especially important in big band arrangements, where drums phrasing with the brass section is typical. The instruments supplying the accents should be noted as an accent by trombones would be played differently by the drummer than a full brass section accent.

Sometimes you can notate a rhythmic pattern without specifying which cymbal or drum and allow the drummer some freedom to choose.

It is helpful to indicate the tempo in Beats Per Minute and whether the feel is straight or swung.

If you are using repeat bars (bis bars), it is very helpful to count each 4 or 8 bars so that the drummer can glance at the music (rather than bury their head in the part to count bars at the expense of their feel and creativity). However many bars there are in a phrase, it's logical to start new sections at the beginning of a new line.

In jazz arrangements it can be effective to change from high hat to ride, or change from a 2 feel to a 4 feel, when going to a middle 8 or solo section.

Some arrangers use the indication "play 16 bars similar" instead of writing out the whole 16 bars. This is very difficult to achieve in computer notation programs such as Sibelius™ and also does not allow for the inclusion of accents and is therefore not recommended.

Further Study:
Guide to Standardized Drumset Notation by Norman Weinberg (Percussive Arts Society Inc.).

6.5 Percussion

Sometimes in big band situations, a percussionist (in addition to the drum kit player) may be added. This player may play non-tuned percussion such as congas, bongos, timbales, tambourine, shaker, wood block, triangle and a whole range of Latin percussion instruments. These instruments are useful in many styles except swing. The percussionist may play tuned percussion such as vibraphone (vibes), which is a useful colour in swing music.

The non tuned percussion may be written in a similar fashion to the drum kit parts – indicate the instrument and feel and give important cues. Number bis bars in groups of four. Many stylistic decisions are often best left to the player. The playing of Latin music requires more precise rhythmic expertise than can be notated in many cases.

In recording situations, the percussionist may play other orchestral instruments such as suspended cymbals, gongs, tympani, xylophone and glockenspiel. It's usually best to check with the performer which instruments are available in advance.

6.6 The Composite Rhythm Section Part

Many arrangers use a composite rhythm part when rhythm players require only good chord changes and information on the layout of the chart. Information relating to rhythmic accents may be included and it is understood that everyone in the rhythm section will play these accents. Instructions may be written to tell the drummer where to play something other than straight time (in whatever style). If more information is required, a composite part becomes too busy and is inappropriate. In such cases, individual parts should be used for each player. It is less common to see composite parts in big band scoring. One such example is Jeff Anderson's big band arrangement of "It Came Upon a Midnight Clear" where there are large sections of small band work and the ensemble figures require only 10 bars of notation in a chart of 108 bars. Example 64 is an example of a typical composite part.

Chapter 7 – Arranging for the Small Ensemble

7.1 Form

Song forms are the structures over which songs are built. There are many common forms such as the 12 bar blues, the AABA and the ABAB format. When first choosing a tune to arrange, try a tune with a 32 bar form. The more experienced arranger can tackle a more complicated form. The overall arrangement will have a form of its own. A good arrangement will introduce the tune, develop it in various ways and recapitulate it briefly at the end. It is important that the original song form (e.g., the 32 bar AABA form) remains intact throughout the overall form of the arrangement. The exception may be in a ballad where, for example, the recapitulation may start at the B section thus halving the form. The development can be in many forms including improvised solos, soli sections or new (composed) material. There is a huge variety available when setting up the form of the arrangement. An organized arranger will have preconceived plan of the form before starting to write. This is where sketching can be a good idea – map out the form of your arrangement first. Make sure to use rehearsal letters and check that the correct key signature appears on every part.

Further listening:
"Day In Vienna" – Dexter Gordon and Slide Hampton (CD: A Day In Copenhagen) – classic small band arrangement form.

Introductions

Most good arrangements include an introduction before the start of the song form. The material used in the introduction should have some relation to the tune and/or be reused in some form within the arrangement. There are some famous arrangements that simply begin with bar 1 of the song form but they are in the minority. Many arrangements for the Count Basie band used a piano introduction. Using a drum introduction was a trademark of the Buddy Rich band but seems a little too easy for the studious arranger.

Further listening:
"Tip Toe" – Thad Jones Mel Lewis Orchestra (CD: Consummation)– no intro.
"Love for Sale" – Buddy Rich Big Band (CD: Big Swing Face)- drum intro.
"Splanky" – Count Basie (CD: The Complete Atomic Basie) – piano intro.
"Groovin' Hard" – Buddy Rich Big Band (CD: Keep the Customer Satisfied) – intro reused.
"Told You So" – Count Basie (CD: I Told You So) – intro reused.

Interludes

Interludes or sections of development or transition can be used effectively to provide some interest in the form of the arrangement. They can be used after the first head and before the first solo section, between solos or to set up the recapitulation of the head. Material used in the interlude could be derived from the tune itself, the introduction or could even be new composed material.

Solos

Sections for improvised solos are usually found in jazz arrangements. The choice of soloist can be influenced by the choice of lead voice in the head, the style of the tune or the players available to actually play the chart. If a great deal of reharmonization has taken place in the head, the changes for the solo section should be tamed somewhat for ease of improvising. Don't use solos just fill in the time requirement of your chart. Bob Brookmeyer says "The first solo only happens when absolutely nothing else can happen…you don't write in a solo until you've completely exhausted what you have to say" (Ratliff, 2006, p. 3).

Further listening:
"Theme and Variations" – Stan Kenton (CD: Kenton Showcase) – no solos.
"Three and One" – Mel Lewis Jazz Orchestra (CD: The Definitive Thad Jones, Live From the Village Vanguard Vol.1) – instruments playing the head are also the soloists.

Backgrounds

Backgrounds should enhance a solo section. As with contrapuntal lines, these figures are often poor primary lines but still have sufficient melodic and rhythmic interest to have merit. The energy levels in the backgrounds can influence the energy level of the solo. Therefore, it's best not to have any backgrounds at the start of a solo section and then have them build, with breathing spaces as the solo progresses. One simple way to achieve this is to have the song form in an open repeated section with the background figures marked "on cue".

Further listening:
"Just Friends" – Rob McConnell and the Boss Brass (CD: Big Band Jazz) – background figures that develop.

Solis

Solis are a prearranged section of instruments playing a line in unison, octaves or block harmony. The melodic material is similar to an improvised solo, only notated. Solis are more common in big band arranging where a

saxophone section, for instance, can play agile harmonized lines. A group called Supersax specialized in playing harmonized transcriptions of Charlie Parker solos. Other solis could include trombones, brass section or even a rhythm section soli.

Further listening:
"Groove Merchant" – Thad Jones Mel Lewis Orchestra (CD: Thad Jones/ Mel Lewis) – extended sax soli with soprano sax lead.
"Just Friends" – Supersax (CD: Supersax Plays Bird) – harmonized Charlie Parker solos for saxes.
"Slo Funk" – Bob Mintzer (CD: Incredible Journey) – trombone and bass unison soli.
"Count Bubba's Revenge" – Gordon Goodwin (CD: The Phat Pack) – each section of the band has a soli.

Shout Choruses

Many arrangements will have some form of a shout chorus. A shout chorus is usually the last chorus of a Big Band arrangement, and is characterized by being the most energetic, lively, and exciting and by containing the musical climax of the piece. A shout chorus characteristically employs extreme ranges, loud dynamics, extended techniques and tutti or concerted writing. It may also use contrapuntal writing or call and response between the brass and saxophones, or between the ensemble and the drummer.

Endings

Each arrangement should have a conclusive ending, however this does not necessarily mean a big, powerful ending. Sometimes a very soft ending will command the listener's attention. Big sustained chords or powerful stabs, with or without fall-offs, are commonplace. Either way, it is fairly unusual for an arrangement to finish on the last bar of the song form (e.g., bar 32 in a 32 bar form) without any extension of the form on the final head, or some sort of coda (or outro) section. Often material used in an ending can be derived from the introduction or interlude sections.

Further listening:
"Skylark" – Mel Lewis Jazz Orchestra (CD: Live at the Village Vanguard) – for a very light ending.
"Groovin Hard" – Buddy Rich Big Band (CD: Keep the Customer Satisfied) – a big finish.

7.2 Voicings in General

Often the arranger is faced with decisions about which notes of a chord should be left out of a voicing. For example, an ensemble with three front line instruments cannot play all the available notes of a 13th chord.

In any type of voicing, the notes to leave out would be the root (tonic), 5th, 11th or 9th if the 13th exists, and the 9th if the 11th exists.

Notes that should not to be left out are the 3rd and 7th as they define the quality of the chord.

Voice leading considerations sometimes require the arranger to choose less than the optimum voicing within a moving phrase.

Basic Voice Leading Rules

While it is beyond the scope of this book to address the wide array of classical voice leading rules, which are often overlooked in jazz arranging, it is worth noting the following basic rules:

> 1. The seventh should progress down a tone or semitone.
> 2. Altered tones move in the direction of their alteration.
> 3. Harmony parts should not make skips much larger than the lead (except the lowest part). *(Example 65)*
> 4. The lowest voice need not follow the roots all the time. *(Example 66)*
> 5. In a II-V-I or II-V progression, the 7th note should resolve to the 3rd *(Example 67)* except in the case of a Major 7th chord moving to a Minor 7th chord *(Example 68)*
> 6. Augmented 4th steps should be avoided - if absolutely necessary, they should then resolve up a semitone. *(Example 69)*.
> 7. Diminished 5th steps should move down a semitone. *(Example 70)*

> ✪Tip: "The inner voices, as well as the bass and melody tones should sound interesting and convey as closely possible, sub-melodies on their own". – Dave Liebman

7.3 Non-Chordal Tones

Notes found in a melodic line that are not part of the accompanying chord are called non-chordal tones and therefore can not be voiced with chordal tones without causing a clash or unwanted interval within the voicing. There are four basic types of non-chordal tones:

1. Passing Tones. Chromatic or Diatonic notes that connect two chordal tones. *(Example 71)*
2. Neighbouring Tones. *(Example 72)*
3. Auxiliary Tones. Connecting the same chordal tone. *(Example 73)*
4. Blue Notes. (*Example 74)*

Methods of handling non-chordal tones such as using compatible chords or half-step planing will be discussed shortly.

7.4 Voicing Horns

When the lowest note of a voicing is D in the bass clef stave or lower, open root position should be used. Above this D, voicings should be inverted. In

Example 64 – "Stella By Starlight" composite rhythm part.

RHYTHM

STELLA BY STARLIGHT

SWING

F#07   B7b9   E-7   A-7

SOFT DRUM FILLS

5   G-9   C7b9   FΔ7   Bb9sus4

TIME IN 2

9 [9] C/G   F#07   B7b9   E-9   E-7

Example 65 – Voice leading.

G7b9b5   Cmaj13

1.
2.
2.
3.

Example 66 – Lowest voice not always tonic.

Gm9   Ebmaj7   Bbmaj7

Example 67 – Seventh resolves to third.

Bb13   Ebmaj7

Example 68 – Major 7th chord moving to minor 7th chord.
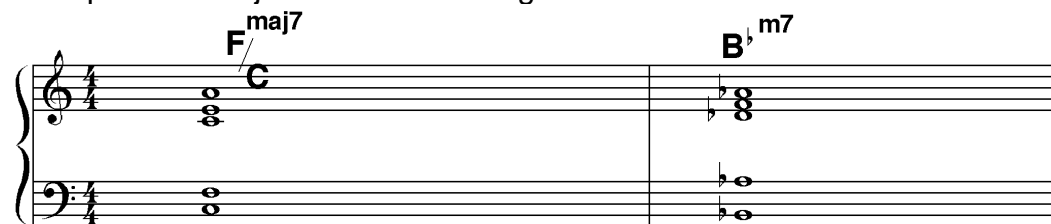
Example 69 – Augmented 4th's resolving up a semitone.
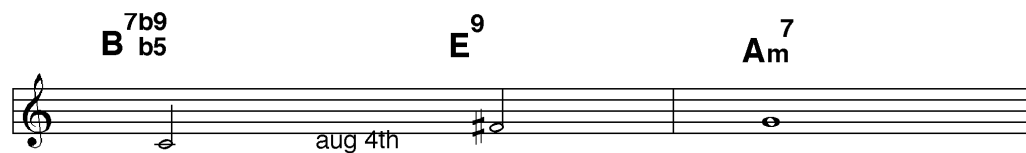
Example 70 – Diminished 5ths resolving down a semitone.
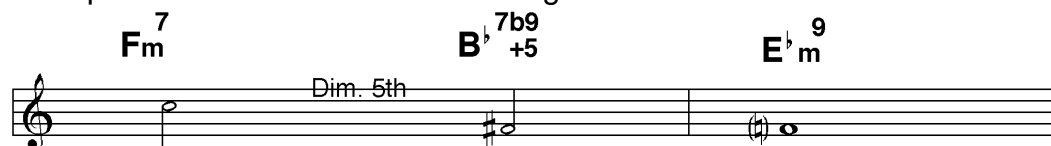
Example 71 – passing tones.

Example 72 – neighbouring tones.

Example 73 – auxiliary tones.

Example 74 – blue notes.

normal situations, notes below this D should only be the tonic (or specified bass note in the case of slash chords). An A at the bottom of the bass clef stave is too low to be used in voicing a G9 chord as it will clash against the rhythm section bass note.

Intervals of a second should not be used below F (below middle C). An Eb voiced against a Db in the bass clef stave is aurally too close to achieve a pleasant voicing. Intervals should be wider in this register.

Chord Voicing Terminology

Close Position - notes in a voicing that fit into one octave or less. Close position voicings aim for a parallel approximation of the melody by filling up the chords as closely as possible.
Open Position - notes of a chord exceed one octave. Open position voicings should obtain a roughly equal distribution from each voice. Lower voices tend to have slightly larger intervals.
Neutral Voicing – top and bottom notes are exactly one octave apart.
Root Position – root note as at the bottom (pyramid shaped).
Inversion – other than root note is at bottom (non – pyramid shaped).
Cluster – two or more adjacent 2^{nds}.

7.5 Harmonic Density

When more than one instrument plays on the same line, or with the same rhythms, the weight of the sound increases. The effect is measured in terms of harmonic density.

The level of harmonic density (density for short) describes the number of different notes in the chords, including the melody (or lead). Density does not describe the number of different horns playing on the same notes.

Density writing does not include music where two or more lines move individually - that is Counterpoint.

Density Levels

1. Unisons and octaves. The level of harmonic density in unisons and octaves is "one" regardless of how many horns or other instruments may be involved at the same time.
2. Two different notes that move together with the same or similar rhythms have a density level of two. Ten horns may be written on these notes, and the density level is still two.
3. Three notes moving together have a density level of three.

Obviously, it follows that as more different notes are added, the density will increase. The largest density possible is 12 – where all possible tones are

present. This is known as a pan-chromatic chord, which can be found in the works of composers such as Lazarof, Persichetti, Takemitsu and Brookmeyer.

Density of One

The level of harmonic density in unisons and octaves is one regardless of how many horns or other instruments may beinvolved at the same time. Density One is a good choice for lines that have a high level of activity and also for slower and quieter tunes with rich changes (such as Dolphin Dance).

> ✪ "The tenor sax and trombone in unison. Man, I never tire of that sound!" – Gordon Goodwin.

Density of Two

Two different notes that move together with the same or similar rhythms have a density level of two. Ten horns may be written on these notes, and the density level is still two.

Thirds and Fourths are the most common intervals used for density-2. They may be mixed, and are easily invertible. In "Devil's Island" (*Example 75)*, take note of the additional movement in bars 13-15, which (used sparingly) adds interest without compromising the harmonic density.

Density-2 can also be used effectively with three horns. Briefly doubling the lead one octave lower introduces a change of sound in 3-horn writing, away from the normal concentration on density-3 and unisons. Such changes in texture (brief and used sparingly) enhance the interest level of the music.

Density of Three

Chords with three different notes have a density level of three. A fourth instrument doubling the lead at the octave does not increase the level of density. Density-3 is typically found in close position, and in low to mid ranges; density-3 written in the higher ranges is more aggressive and harder to handle.

The most common density three voicings are:

1. Close position chords (and their inversions) are most effective when used in unusual harmonies and with change-bass chords. *(Example 76)*
2. Close position chords containing major and minor 2^{nds} for colour and power. Whole-steps are common at both the top and bottom. Half-steps are better at the bottom than at top. *(Example 77)*
3. Quartal chords (chords constructed from voices in 4^{ths}) are most effective when the tempo is slow, or when the rhythm section reinforces the voicing. Open voicings encourage inner movement. *(Example 78)*

4. Open position chords are best used when the movement is slow. They can easily be overused. *(Example 79)*

Large Densities

While voicings do exist containing six and seven different notes, densities of 4 and 5 are thought of as the large densities. Few sections in a large ensemble consist of more than five players (playing different music), so densities larger than 5 are usually a result of combining smaller densities.

Density - 4

Four different notes, generally from chords that would default to stacked thirds.

Root position (bottom note is root or bass of the chord) - slow moving chords, with a pyramid shape. *(Example 80a)*
Inversion range (bottom note is 3rd or 7th of chord) - usually open voiced, with an hourglass shape. *(Example 80b)*
Density-4 voicings may accommodate five instruments, by doubling the lead one octave lower. *(Examples 80c & d)*

Density - 5

As density-5 voicings require at least five horns, these voicings will be discussed in following chapters dealing with the big band.

In-class Analysis – "Nutville" and "Miss Bessie's Cooking".

Horace Silver's "Nutville" *(Example 81)* displays excellent Density-3 writing in a modal style using 2^{nds} between the lower two voices. Ernie Wilkins' arrangement of "Miss Bessie's Cooking" *(Example 82)* utilizes densities of 1 (sometimes octaves and sometimes prime unisons) and 3 interchanged.

7.6 Harmonization Of Non-Chordal Tones

Using a three bar extract from Thad Jones' "Three and One" *(Example 83)*, several methods of harmonization of Non-Chordal Tones can be illustrated:

1. Directly from Thad Jones' score: a **passing diminished chord** (enriched with an added note) and **half step planing** (exact parallelism – see below). When the melody moves by a half step into a chord member, other voices also move in parallel by a half step.

2. An old-fashioned method of simply voicing each melody note with the nearest chordal tones. The melody is also doubled an octave lower. The main problem with this method is that inner parts become static and have repeated

Example 75 – "Devil's Island" (Wayne Shorter)

Example 76 – "King Cobra" (Herbie Hancock – My Point of View 1963 EMI)
(Bridge 0:47sec)

Example 77 – "Day In Vienna" (Slide Hampton) (note – the implied harmony
is close to changes)

Example 78 – "You Don't Know What Love Is" (by De Paul & Raye, rec. by Art
Blakey & the Jazz Messengers)

Example 79 – "King Cobra" (Herbie Hancock – My Point of View 1963 EMI)

Example 80a –Root Position

Example 80b – Inversion

Example 80c – Root Position

Example 80d – Inversion

Example 81 – "Nutville" (Horace Silver)

Example 82 – "Miss Bessie's Cookin'" arr. By Ernie Wilkins.

Example 83 – "Three and One" (Thad Jones) voicing exercise.

notes or larger intervals than the melody.

3. Using half step planing exclusively.

4. Using parallel motion exclusively.

5. Using quartal harmony, ignoring the need for chordal tones.

Half Step Planing or Parallelism.

Half step planing is when all the voices move in a half step in parallel motion. This is an effective way to harmonize chromatic approach notes (non-chordal tones). The arrangement of Nutville *(Example 81)* uses extensive parallel motion. Example 84 illustrates parallelism in reharmonization.

7.7 Further Methods of Reharmonization

To increase Harmonic motion, a chord in a progression may be temporarily thought of as a transient tonic. Working backward from that chord, a V – I progression may be inserted, or a II – V – I progression. The use of a tritone substitution may add extra colour and as seen in example 85, this tritone may be of a major 7th type chord (as often used by Thad Jones). *(Example 85)*

Discussion – "Just Friends" – 8 Piece Arrangement.

Example 86 is the full score to an arrangement of "Just Friends" illustrating several of the previously discussed concepts and examples.

Example 84 "Lush Life" reharmonized by McCoy Tyner using parallelism.

Example 85 – Increased harmonic motion.

Example 86 – "Just Friends" – 8 piece arrangement.

Just Friends
Arranged Daryl McKenzie

Chapter 8 – Big Band Arranging – the Sections

It should be realized that there is no single correct way to write for a big band; there are several different styles which are equally valid. The choices an arranger makes in his voicing procedure are, to a degree, a matter of personal taste. Duke Ellington's approach is different from Bill Holman's; Bob Brookmeyer's approach is different from Gil Evans'—there are even some differences in voicing technique between writers who belong to the same general school of big-band writing. Individual stylistic preferences are acceptable, indeed, inevitable. However, there are some basic principles of the craft, which should be understood and applied in order to achieve the best possible sound from any ensemble regardless of personal musical tastes. In writing for the big band, we can extend the techniques of small band writing.

> ✪Tip: A Big Band is sometimes known as a Stage Band, Showband, Jazz Orchestra or Lab Band. Same band, different name!

> ✪Tip: Ask questions! Check with people who actually play the instrument if you are unsure about a technical issue.

8.1 Arranging for the Saxophone Section

Four members of the saxophone family are common to modern jazz. They are Bb soprano, Eb alto, Bb tenor and Eb baritone saxes. Bb bass saxophone is rarely seen nowadays, except occasionally in symphonic wind bands. Stan Kenton used the bass saxophone and charts such as "Malaguena" are published with the original part (the publisher now publishes an alternate version with standard instrumentation).

The saxophone is extremely agile. Arpeggios and wide leaps are played easily, and are therefore integral to the idiom of sax music. Saxes are also capable of quick and extreme contrasts in dynamics. The shift from a brilliant or harsh sound to one of velvety softness can be made instantly.

Saxophone Range Chart:
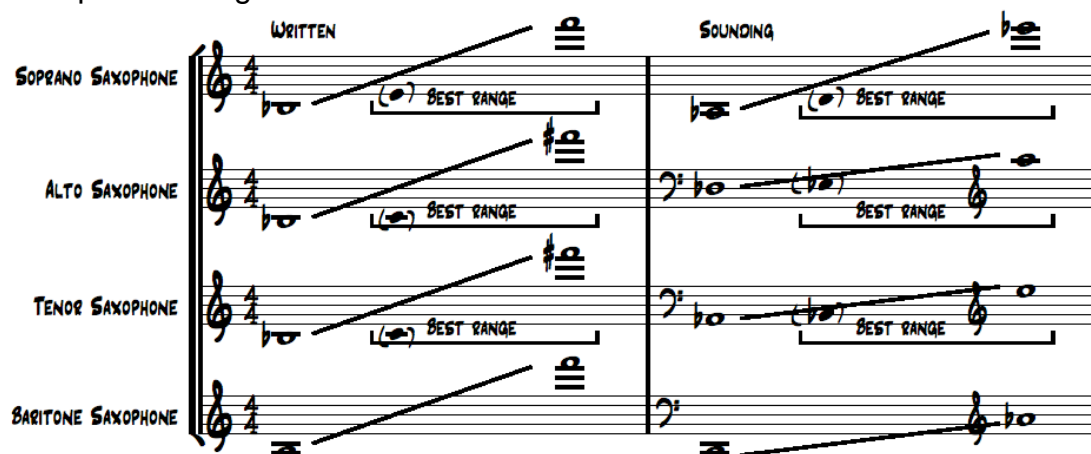
The typical sax section in a big band will consist of five players:

1st sax ALTO SAX, doubling on soprano sax (for more aggressive styles). Other doubles include flute and clarinet. Lead alto plays lyric solos (written) and may be given improvised solos as well.
2nd sax ALTO SAX, doubling flute and clarinet. 2nd alto is less likely to be a strong improviser, and is seldom given the lyric (written) solo work.
3rd sax TENOR SAX, primary improviser. Doubles include flute and clarinet.
4th sax TENOR SAX, doubling flute and clarinet.
5th sax BARITONE SAX, doubling flute. This chair may double clarinet and the bass clarinet. Baritone is sometimes given improvised solos.

Many published charts will include substituting sax parts written with no doubles. Depending upon the players available, other doubles can include piccolo, occasionally oboe and rarely bassoon. Oboe and cor anglais were used on the Miles Davis CD "Aura" but were played by a specialist player in addition to the big band. Michael Rabinowitz plays bassoon with the Mingus Orchestra.

Further Listening:
"Waltz of the Prophets" – Stan Kenton (CD: Adventures in Jazz) (at the time of writing, a video was available on YouTube) – bass saxophone.
"Poinciana" – Bob Florence (CD: With All the Bells and Whistles) – woodwind doubles.
"Exotic Forest" – Sun Ra (CD: Nothing Is) – oboe solo by Marshall Allen.
"Wolverine Blues" – Charles Mingus (CD: Epitaph) (also viewable online at http://www.mingusmingusmingus.com/video/3.WolverineBlues.mov – bassoon solo.
"The Door" – Bob Brookmeyer (CD : Spirit Music) – Kirsty Williams' solo cor anglais.

Common Voicings for the Sax Section

Unisons (prime and octave) are very effective and can deliver great strength and flexibility. Example 87 shows the use of prime unison between 2 altos and 2 tenors leaving the baritone tacet.

Duets - voicings in 3^{rds}, 6^{ths} and tritones. Many bands such as Glenn Miller and Billy May used this voicing successfully.
Example 88 shows the use of density two between 2 altos and 2 tenors with the baritone doubling the melody an octave lower (which does not change the density). *(Example 88)*

Saxes and Higher Densities

Density-4 for five saxes occurs in two kinds of voicings:

Block Voicings are typical 1-3-5-7 chords in close position, with the 5th part (baritone sax) doubling the lead (alto 1) one octave lower. *(Example 89)*

When the lead moves into a higher register (top of the staff) or when the style is softer, density-4 saxes may open up into drop-two voicings.

Drop-two (or Semi-Open) refers to dropping the second note from the top one octave. The chord is now in open position, occupying more than an octave. The lead is more exposed. Drop-two voicings are appropriate for use under lines that are less active (covering less range) and lines that move into the higher parts of the staff (and above). Tenor two is given the double lead*.* By dropping the second voice an octave lower - it takes the edge off the more brilliant closed voicing sound creating less tension. *(Example 90)*

By putting the saxes in a brilliant range and using a clarinet lead with 2 altos and 2 tenors, you would produce a colourful sound used successfully by Glen Miller. This voicing also works best if using a soprano lead.
It isn't necessary to maintain the exact voicing throughout, it can alternate as the melody or harmony dictates. In fact this is a desirable option.
By substituting a clarinet for the lead alto, an Ellington woodwind voicing can be produced. Ellington also often used many fourths in his voicings.

> ✪Tip: Voicings in fourths is considered a fairly modern and sophisticated technique. Ellington was ahead of his time.

Density Five

Density-five is instantly more colourful than density-four, and so is a typical density level in extended and altered chords. This is true both in root position and inversion voicings. *(Example 91)*

Root position Density-5 chords have a pyramid shape. The larger intervals are at the bottom of the voicing.
Inverted position Density-5 chords for saxes have the closest intervals placed in the middle. Larger intervals are at top and bottom. 3^{rds} or 7^{ths} of the chord are at the bottom.
This voicing is used primarily in ballads because of its dramatically deep sound and opportunities for moving inner voices within the section. This texture loses its mobility at bright tempos however. *(Example 92)*

Density-five may also be found in **Cluster Voicings**. These are most appropriate in highly coloured harmonic styles such as music written and scored by Thad Jones. Clusters are also valuable when saxes are combined with one or more brass instruments.
Cluster voicings work best at a lower velocity. They muddy easily when the speed increases. Clusters should originate in the cluster range, staying close to the middle of the grand staff. *(Example 93)*

Example 87 "Upon a Rock" (Lachlan Davidson. Rec. by Daryl McKenzie Jazz
Orchestra) - Density 1 saxes.

Example 88 "Upon a Rock" (Lachlan Davidson. Rec. by Daryl McKenzie Jazz
Orchestra). Density 2 saxes.

Example 89 "Hola" (Gianni Turcio. Rec. by Daryl McKenzie Jazz Orchestra).
Density 4 close position voicing.

Example 90 "Still Workin' It" (Daryl McKenzie) - Close Position mixed with Drop-2.

Example 91 "Hola" (Gianni Turcio. Rec. by Daryl McKenzie Jazz Orchestra) - Density 1 moving to density 5 (inversion).

Example 92 "Clouds on Blue" (Lachlan Davidson rec. Daryl McKenzie Jazz Orchestra) – Ballad density 5 root position.

Example 93 "Legacy" (Gian Slater arr. Ross Irwin rec. Daryl McKenzie Jazz Orchestra) – Saxes cluster voicing.

In-class Discussion: The Sax Voicings of Thad Jones

Using "Three and One" *(Example 99)* as an example of typical Thad Jones writing. In voicing the saxes, their soli at letter C is a model of its kind. Note these points:

1. The sax section sounds good throughout, partly because each player plays idiomatic figures in registers where they can produce a good sound. The voicings derive from this concern, as well as from Thad Jones' interest in finding ways to make certain notes rub dissonantly against each other.
2. Jones' sax voicings are usually spread more than an octave (when all five are playing), most often with an interval of a 9th or 10th between the outer voices (see bars 37-49). Jones often uses the 5-part drop-2 voicing, which is formed by taking the closest voicing of a 5-part chord from a given melody note down and dropping the second highest voice from the top by one octave *(Example 94).*

When the lead sax drops into a low register, Jones frequently closes up the 5 part voicing (bars 34-35) - as the lead goes higher (bars 35-36) he opens up the spacing even more. These wider spreads sometimes use a 5-part drop-2- and 4 voicing *(Example 95)* Intermingled with these 5-part voicings, Jones uses 4 part drop-2 with the melody doubled an octave lower *(Example 95),* as also used by Nestico. Jones frequently does this on minor 9th chords when the 9th is in the melody *(Example 96).* On dominant 13ths, when either the 3rd or 13th is in the melody, he uses a 4-part voicing with the melody doubled *8vb (Examples 97 & 98).*

Jones normally provides more space between the top two saxes and between the bottom two than between the inside voices (*Examples 94 -98*). If there are minor 2nd dissonant grinds, they will usually come between voices 2 and 3 or between 3 and 4 (bars 14-15). 13ths are often used in dominant 7th-type chords, but the 13th and natural 5th are not used in the same octave - actually, the 5th is usually omitted in 13th chords (*Examples 97 & 98*).

Routine - Scoring Moving Saxes With Block And Drop-2 Voicings:

1) Start with a good lead line, and the chord changes *(Example 99).* With leads in the concert staff, use block voicings. For sudden leaps or for leads above the staff, use drop-two voicings. *(Example 100)*

2) Voice first the notes that are most important to the line. These include cadences, leaps, and notes that most obviously fit the chord symbol at hand. Except during slow movement, avoid seconds between saxes 1 and 2. *(Example 101)*

3) Voice the 8th note leading tones and half-step neighbouring tones. Use parallel movement in all parts. Don't be concerned with apparent dissonance

against the changes: 8th note chords go by quickly. Good voice leading is necessary. *(Example 102)*

4) Voice the remaining notes with compatible chords. These are chords built with notes from whatever scale is suggested by the chord at hand. Good voice leading is most important: adjust the chord's extension or alteration if you need. *(Example 103)*

In-class discussion – Supersax voicings – "Donna Lee" arr. Med Flory.

The arrangements by Supersax's Med Flory are considered classic examples of block voicing for the sax section. Flory arranges the transcribed solos of Charlie Parker for five saxophones using block voicings exclusively. In most situations such active lines would be best voiced in density one, however, the skill in both the writing and playing of these arrangements are well worth studying.

Study a transcription of a Charlie Parker solo *(Example 104),* noting the non-chordal tones, and then listen to a recording of Supersax. Supersax can be found on YouTube (at the time of writing) at:
http://www.youtube.com/watch?v=kNpAfRdnUGY

Example 94 – "Three and One".

Example 95   Example 96   Example 97   Example 98

Example 99 - Thad Jones "Three and One" excerpt.

Example 99 – melody and chords in concert

Example 100 – voice bari and final cadence.

Example 101 – voice important notes.

Example 102 – voice leading tones and ½ steps.

Example 103 – voice remaining notes.

Example 104 - Charlie Parker's solo on "Donna Lee".

Exercises

Sax Voicing Exercises

Part 1 : Show appropriate voicings

Part 2 : Show 4 different voicings

8.2 Arranging for the Brass Section

Brass Voicing Ranges

The typical brass section will consist of four trumpets and four trombones. Sometimes five trumpets and even five trombones may be found.

Trumpets
1st – lead chair
2nd – supportive, frequently improvisation
3rd – supportive, sometimes assistant lead
4th – the lowest chair, primary improviser
5th – takes the role of the 4th in a five-trumpet section

Trombones
1st – lead chair, soloist, improviser
2nd – supportive, improvisation

3rd – supportive
4th – bass trombone
5th – bass trombone

Doubles for trumpets – the flugelhorn which is good for solo lines or sectional playing especially in ballads. Occasionally the french horn can be found in a big band brass section. Rob McConnell and the Boss Brass and the Mel Lewis Jazz Orchestra are examples of big bands using french horn. The tuba is also an occasional member of the brass section as found in the Stan Kenton Orchestra and the Kenny Wheeler Big Band.

8.3 Trombone Section Voicings

Trombones are voiced in three ways *(Example 105):*
1. Open voice root position. The root is at the bottom and the chord spans over an octave. For moving lines, the chord should be closer in span, as the motion slows or sustains, the bottom may drop down creating a larger span. Root position chords are seldom written in middle or upper ranges.

    > ✪Tip: Don't fear ledger lines when writing 1st trombone parts but remember the physical endurance aspect of playing a brass instrument.

2. Open voice inversions with the 3rd or 7th on the bottom (4^{ths} or 6^{ths} when there are no 3^{rds} or 7^{ths} present in the chord). Lead notes are higher than in root position chords. Open position chords do not move quickly.
3. Close position chords in which all four notes occur within an octave. Close position chords move easily.

Choosing the Right Voicing

Most of what is written for the trombone should fall within the average playing range. The exception is when the section is written in density, the lead part will spend time in the upper register.

Low Range Melody – Unisons are good. *(Example 106)*

Higher velocity melodies – usually in inversion, close position and often cadence in root position. *(Example 107)*

Higher range melodies - lacking the interval activity should be voiced with a higher density. Longer durations suggest open position chords. (Note: syncopation is idiomatic to brass writing, especially when the number of horns increases.) *(Examples 108 & 109)*

As the tempo (or velocity) slows, the variety in voicings and chord-types should increase. *(Example 110)*

Analysing a Melody Line for Voicings

Consider the following melody:

Solutions:
1. Faster and/or More Active *(Example 111)*.
2. Lower Velocity use Larger Voicings and/or add Inner Movement *(Example 112)*.
3. Higher Range use Inversions *(Example 113)*.

Further Listening:
"My Favourite Things" – arranged and recorded by Matt Niess and the Capitol Bones – 5 trombones and rhythm section.
"A Night in Tunisia" – recorded by Jay and Kai Trombone Octet – 8 trombones.

8.4 The Trumpet Section

The playing range and transposition for the trumpet were discussed in chapter 7. Most of what is written for trumpets should fall within the average playing range. The lead trumpet will move into the upper register for peaks of melodic activity, and for fully voiced sections of a chart. In this range, the lead trumpet provides the top for the entire band. However, the lead trumpet will also drop frequently into the average playing range, otherwise, the music will sound unimaginative. At the end of tutti sections, repetitive and closing ideas may fall entirely within this upper register.

The extended range should be reserved for occasional use by strong lead players. Other players can hit the notes, but tire more easily, missing notes.

Trumpets seldom move into the lower register, except when soloing as this register is better covered by the trombones. Full unisons with longer time values sound good in this register.

The flugelhorn is a Bb instrument. Like the trumpet, the flugelhorn sounds a whole step lower than written. As flugelhorn is a conical bore instrument, it is extremely agile. The flugelhorn has a soft, velvety sound, simulating the french horn. It is particularly effective when written in unison over chorded trombone material.

The flugelhorn is a common double for trumpet players. The writer should check to see which trumpet players own and carry the instrument with them before writing music that will not sound equally as well when played on a

Example 105 – Trombone Voicings

Open – Root Position   Open – Inversions   Close Position

Example 106 – Low Range Melody – "Dialmentia" (Tim Davies - rec. by Daryl McKenzie Jazz Orchestra)

Example 107 – "Still Workin' It" (Daryl McKenzie) – Close position, inversion voicings then root position.

Example 108 – "Hola" (Gianni Turcio rec. by Daryl McKenzie Jazz Orchestra) – Trombones in open position, density four.

Example 109 – "Clouds on Blue" (Lachlan Davidson rec. Daryl McKenzie Jazz Orchestra) -Inversion voicing.

Example 110 – Slow Tempo – Voicing variety. (Trombones)

Example 111 – Faster and/or More Active

Example 112 – Lower Velocity

Example 113 – Higher Range

Exercise

Trombone Voicing Exercises

trumpet aimed into the stand or played with Bucket mutes.

Voicing Trumpets

The trumpet section plays well both in unison and in density. Unison trumpets can be extremely effective, especially when written in the top half of the Average Playing range.
Further Listening:
   "Party Time" – Bob Mintzer (CD: "Timeout" – Buddy Rich Big Band) – bars 25–32 (1:08).

When written in density, trumpets should be supported from below. Trombones are the normal source of support but saxes can do the job if the trombones are occupied elsewhere. Trumpets are given one of three voicings:

1. Close voice – density 4 chords. Most voicings for four trumpets fall into this category. Close voicings create a powerful sense of ensemble. *(Example114)*
Further Listening:
    "Night in Tunisia" – Mike Vax (CD "Trumpets".

2. Neutral voice triads (double lead). When trumpet 1 is in the high register, the trumpet section should be voiced with the lead doubled an octave lower by trumpet 4. The remaining trumpets form a triadic voicing. *(Example 115).*

3. Open voicings are only effective when trumpet 1 is in its extended range. The section trumpets should not be written too high – try Quartal or Drop 2 chords. *(Example 115).*

Chapter 9 – The Brass Section and Combining Saxes.

9.1 Voicing the Brass Section - Common Brass Voicings

1. Basie Voicings

When the brass section must move quickly together as one section (but not in unison), Basie voicings work well. Basie voicings involve close position density-4 chords for both trumpets and trombones. Ordinarily, trumpet 1 and trombone 1 will both play the melody, one octave apart. The voicings should be straight ahead, and the melody should provide the interest. The sound is cohesive, and great voice leading is easy.

   a) **Parallel Coupling**: density-4 close position voicings move in parallel, with trombones duplicating the trumpets one octave lower. Trombone 1 doubles trumpet 1 an octave lower, trombone 2 doubles trumpet 2 at the octave, etc. *(Example 116)* Note: Parallel couplings used for half notes (or longer) will give the sound of a 50's dance band chart.
   b) **Higher Range**: When the lead trumpet moves above a written high C, trumpets may move from close position voicings to neutral position (triadic density-3 voicings with trumpet 4 doubling the lead at the octave). Trombone doublings move down one notch but remain parallel. *(Example 116)*
   c) **Increasing The Colour In Parallels**: To increase the colour while retaining the punch of close voicings and couplings, take one or two of the couplets out of parallel. (Replace octave movement with movement in 7^{ths}.) This will increase the harmonic energy, and is great for syncopations, static movement and longer notes. *(Example 116)*

Too much parallel coupling dates the sound of a band. Solution: take one or more of the couplings out of parallel. In Example 117, firsts and seconds are left in parallel, thirds and fourths form 7^{ths} instead. *(Example 117)*

Cautions:
   1. Don't write 3^{rds} in trombones lower than c-e in the bass clef staff.
   2. Use compatible chords for stepwise motion when the movement is too fast to warrant additional chords in the changes. *(Example 118 (2))*
   3. When you encounter rapid half-step movement, use the same half-step movements in all parts (1/2 step planing). *(Example 118 (3))*

2. Unison Trumpets, Chorded Trombones

Unison trumpets (or saxes, or a mix of) playing in the staff can be supported by trombones written either in root or inverted position chords. The rhythms should differ with movement in the trumpets and sustained trombones, or slower trumpets with movement in the trombones. This is a good sound and should be allowed to last for a while. *(Example 119)*

Example 114 – "Still Workin' It" (Daryl McKenzie) -Trumpets in close position.

Example 115 – "Still Workin' It" (Daryl McKenzie) -Trumpets in neutral voicing (bars 218 & 219) then drop 2 (bar 220).

Example 116 – Basie Voicings

Example 117 – removing parallels

Example 118 – stepwise and 1/2 step movement

Example 119 "Clouds On Blue" (Lachlan Davidson, recorded by Daryl McKenzie Jazz Orchestra) - Unison Trumpets /Voiced Trombones

3. Medium Range Leads

Slow movement (or sustained notes) in the upper part of the staff should be voiced more colourfully than lines that move more quickly. Medium range chords should be colourful, and therefore have a reasonable sustain to them. Medium range leads, voiced for eight brass, are written with root position, open voice trombones. Trumpets are written with close or clustered voicings. *(Example 120)*

Normal chords should be written at least at the level of 9th or 11th chords. Trombones will play the basic chord, and trumpets will add the higher extensions or alterations. Longer or more colourful chords should involve more close intervals between the lower trumpets or between low trumpets and upper trombones. Lower trombones should continue to provide the basis.

4. High Trumpet Leads

When the lead trumpet is above the staff, the brass rhythms will be syncopated or longer in duration. Basie voicings will not give the necessary harmonic punch in this register.
When high leads move but are not running, keep the Trombones high for support. Write the Trumpets with double lead, in a triad chord (neutral voicing) that is compatible to but different from Trombones. Write the Trombones in an open inverted position with the 3rd or 7th of the chord at the bottom.

When the high leads slow down or cadence, the Trombones may be spread to provide a feeling of finality.

Easy Routine For Scoring Open Brass Chords

In brass writing, the feeling of ensemble between the two sections (trumpets and trombones) depends upon the right distance between the two leads. *(Example 121)*

1. Place the two leads. To get the most powerful section feel, keep the two leads within an octave and a tenth apart.
2. Voice the trombones first. They provide support for the trumpets and are responsible for agreeing with the rhythm section even when trumpets don't.
3. Then harmonize the trumpets. If the leads are an octave apart use a close position chord for the trumpets. If the leads are a 10th apart, use a triad with the lead trumpet doubled an octave lower (the Neutral voicing).

The trumpet chord should be compatible to the trombone chord, but not exactly the same. In context, these devices are invariably mixed.

9.2 Mutes

Mutes are used to change the tone colour and not (as sometimes mistaken) to alter the volume of brass instruments.

The common mutes used, which professional players should carry are:

Trumpet	Trombone
Cup	Cup
Straight	Straight
Plunger	Plunger
Harmon	

The cup mute is often used for trumpets and/or trombones in sectional writing *(Example 122).*
The Harmon mute is made for trombone but is mostly used for comical effect. Harmon mutes for trumpets are effective in solo or sectional writing *(Example 123).* Cluster voicings are effective for Harmon muted trumpets *(Example 124).* The Bucket mute is sometimes available for both trumpet and trombone *(Examples 125 & 126)* and there are many other mutes such as the Solotone that were more popular in the mid-20th century dance bands. Mutes are also available for the french horn and tuba.

Further listening:
> "88 Basie Street" – Sammy Nestico's composition (CD – "88 Basie Street" - Count Basie) - 4 trombones in close position, followed by 4 Harmon muted trumpets in close position (with 4 flutes 8va). The baritone sax joins the trombones and listen for the break to unison in the trumpets.
> "It's About Time" – Sammy Nestico's composition (CD – "Have a Nice Day" – Count Basie) - last 4 bars - trumpets and trombones in cup mutes.

9.3 More on Brass Section Writing

Nestico's Basie Voicings

Note the distribution of colour tones. Register permitting, the trumpets play a triad, with the fourth doubling the lead an octave lower. The trombones support with a chord cluster. These voicings have a good feeling of balance. *(Example 127)*

Example 120 – Medium Range Leads

Example 121 – Routine for Scoring Brass.

Example 122 - "Legacy" (Gian Slater arr. Ross Irwin rec. Daryl McKenzie Jazz Orchestra) – Cup muted trumpets.

Example 123 – "East Side Lonely" (Ross Irwin rec. Daryl McKenzie Jazz Orchestra) – Harmon muted trumpets.

Example 124 – "East Side Lonely" (Ross Irwin rec. Daryl McKenzie Jazz Orchestra) – Harmon muted trumpets in cluster voicing.

Example 125 – "Dialmentia" (Tim Davies rec. Daryl McKenzie Jazz Orchestra) – Trombones in Bucket mutes

Example 126 – "Dialmentia" (Tim Davies rec. Daryl McKenzie Jazz
Orchestra) – Trumpets and Trombones in Bucket mutes with Flugels.

Example 127 – Nestico's Basie Voicings

Exercise

Brass Voicing Exercises

Other Brass

In some situations 1 or 2 french horns can be a useful addition, as can be a tuba. The use of piccolo trumpet (e.g., Lew Soloff with the Gil Evans Orchestra) or euphonium (e.g., Rich Matterson) is fairly rare but has been used to good effect. Stan Kenton used a section of mellophoniums, however it may be difficult to find someone who owns one. These parts are now often published as french horn parts.

> ✪ The cardinal rule about the mellophonium-- IT'S ALWAYS OUT OF TUNE!!" - Ron Lutterbie

Further Listening:
"Copenhagen Sights" – DVD "Gil Evans & his Orchestra at Lugano" – piccolo trumpet, french horn and tuba used in a big band.
"Georgia On My Mind" – Rich Matteson (euphonium) with unknown big band – online mp3 at http://www.richmatteson.com/georgia.mp3

Discussion - Don Sebesky Exercise.

The following discussion is extracted from *The Contemporary Arranger* (Sebesky, 1975). This valuable exercise has been included in its entirety.

The basic rule for voicing any combination of instruments can be stated as:

Determine the kind of overall sound and feeling which best serves the needs of the passage you are scoring (should it be a big, powerful, open sound, or light and intimate?; should it be tight and pointed for maximum impact, or soft and mellow?; should it be voiced in a way which would permit rapid melodic motion, or should the vertical aspects of the passage be emphasized?; etc.) and then combine the instruments available to you in the way which will most successfully achieve the desired objectives.

We will now examine several examples in which we apply this basic rule to the voicing of brass instruments.

First, we'll add four trumpets and four trombones, showing how this phrase would be voiced for a full eight-piece brass section. *(Example 128)*

The first thing to notice is that each individual instrument has been given a line as melodic as possible within the chord structure. This is proper voice-leading.
Notice, also, that each separate section is voiced in such a way as to sound complete within itself, in addition to contributing to the overall sound of the brass ensemble as a whole.

The trombone section is voiced in close position, almost exactly doubling the trumpet section an octave lower, in order to insure maximum brilliance and mobility. Except for the last two chords, the trombones are not spread in order to give the bass trombone the chord roots. Now compare with Example 129. This is unnecessary in a swing passage of this kind, especially in a recording situation where the sound of the string bass is strong enough to fulfill this function. Had this semi-open voicing been used in the trombones, the overall sound of the ensemble would have been grounded or anchored, detracting from the brilliance and mobility so important to effective jazz writing. We'll save the open voicing for the climax of the passage, where its added weight will be welcome.

In example 128, the first trombone doubles the lead trumpet all the way, except for the final two notes, further ensuring a brilliant, brassy sound. In large brass ensembles, especially where the music is strong and rhythmic, this octave doubling is advisable. In ballad writing or for soft backgrounds, octave reinforcement can be overpowering and is to be generally avoided. Once you begin a passage doubled this way, however, you shouldn't noticeably interrupt or terminate the line unless the character or sound of the music changes. *(Example 130)*

Not only does this disturb the continuity of the line, it also creates frustration for the lead trombone, who has to weave in and out of the melody. If there is a good reason (usually harmonic) to temporarily interrupt the octave doubling, an instrument of equal strength should continue the line at the point where the original doubling was interrupted.

In bar 3 of example 128, notice the gradual change from close position voicing to semi-open position in the trombones. This is done for three reasons:

1. The trombone chord on the downbeat of the fourth beat (D#m7-5) is intentionally incomplete (no D#) in order to ensure the best voice leading, especially for the bass trombone.

2. The chord on the upbeat of the fourth beat (E 7-5+9) is the richest sounding chord thus far in this passage, and the voicing used is the one best suited to bring out the resonant quality of the chord.

3. The semi-open voicing prepares the ear for the full-open voicing used for the last two chords of the phrase.

On the second beat of bar four, an open voicing was used temporarily—not to reinforce the bass notes or the chordal root tones, but to reinforce the wide melodic leap of the lead line. In brass writing of this kind, it is important to move all voices in conjunction with the lead voice (insofar as the harmonic pattern allows) most of the time—especially when

encountering such wide leaps, in order to give the overall ensemble a feeling of togetherness.

The next few beats illustrate the use of contrary motion between the low trombones and the rest of the ensemble, providing temporary relief from the parallel motion of the previous bars.

The last two chords are voiced wide open, spanning almost four octaves. We are striving here for a big, forceful, sustained sound unlike the tight, mobile feeling we were trying to achieve earlier in this passage.

A beautiful sound for eight brass (used very successfully by the Les Brown band in the 1950s) can be achieved by voicing the trumpets in close position, muted with Harmons and doubling this voicing exactly in the four trombones an octave lower, playing open, with an amplified guitar underneath the ensemble also playing the melody line in the low register. This voicing is especially effective in a slow-to-medium tempo groove. (Sebesky, 1975, pp. 32-34)

The distribution of tones in the cadence chords.

As a general rule, when scoring higher number chords (11^{ths}, 13^{ths}), the 3^{rds} and 7^{ths} should be placed in the lower middle register where they are most resonant, thereby exerting their influence over the entire ensemble voicing.

Save the upper register for most major sevenths, ninths, elevenths, and thirteenths to ensure maximum brilliance.

The Fifth is generally the least important tone of a higher numbered chord, and as it can actually weaken the chord's overall resonance, it should usually be omitted except in very large ensembles (where an open 5th could possibly be used at the bottom of a large voicing). *(Example 131)*

9.4 Adding Saxes to the Brass Section

When both saxes and brass play at the same time, the lead is usually in the brass. Saxes provide an important support to this ensemble sound, as the brass usually appear to have the lead. Saxes may be fulfilling one or more of the following functions:

1. Saxes may add colour and/or glue to the ensemble. *(Example 132)*
2. Saxes can play the same notes as the brass, not only on moving lines but also in chord voicings. By this, they increase the weight of the music. *(Example 133)*
3. Saxes can also play the same notes to fully orchestrated sections. In this way, the saxes add weight to the orchestration without adding more motion. *(Example 134)*

Example 128 – Don Sebesky

Example 129

Example 130

Example 131

4. Saxes may add linear motion to brass (the same as filling). When the weight and power of an entire band is required, but everyone cannot play on the same rhythms, unison sax fills are extremely exciting. This counterpoit should progress into full tutti (same rhythms) if only for a few chords. *(Example 135)*

5. Saxes can lay out while the brass play. This technique is most useful where a change in contour or interest is needed. It is less useful in the beginning of a chart. *(Example 135)*

On completion of the brass parts, the arranger can return and add saxes for support, using them as a solid, harmonically complete unit of their own. They will naturally overlap trumpets and trombones.
Although you should be constantly striving for a good rhythmic feel in your writing, the importance of the melody is the first priority. At times there can be as many as three or more instruments playing the melody line in the voicing structure of the inner parts.
When you are scoring a rhythmically-unified type of ensemble, and want to keep it straightforward and simple, avoid using saxes to fill in every open spot or every added note in the chord. This does just the opposite of creating a fuller or richer sound —it weakens it harmonically and detracts from the melody line

Further Listening:
Sammy Nestico's "High Five" (CD: "Basie Cally Sammy"), "Ya Gotta Try" (CD: Count Basie – "Prime Time") and "Freckle Face" (CD: "No Time Like the Present") – all great examples of combining saxes and brass.

9.5 Combining Saxes and Brass – the Soft Chorus

Writing low ensembles presents a different set of problems and solutions. When the brass drops into a very low register, it is perfectly logical to overlap and double the bottom register of the trumpets for support. Care must be taken to keep the harmony (3^{rds} & 7^{ths}) from getting too low, even if most of the band is playing in only one octave. It may also be necessary to have alto saxes overlap the trumpets. This is acceptable. Some writers choose to allow the lead trumpet to rest while the 2nd or 3rd trumpet takes the lead.

Sammy Nestico's "Gotta Be My Way", displays an ensemble that combines some of these techniques within one chorus. This is basically a soft ensemble chorus that precedes the final sweeping statement of the theme. As mentioned earlier, some of the low notes, out of necessity, will be doubled. When doing so, we should try to balance the instruments so that one note of the chord isn't getting all the weight. *(Example 136)*

Example 132 – "Dialmentia" (Tim Davies - rec. by Daryl McKenzie Jazz
Orchestra) – saxes "glue" ensemble and add harmonic colour

Example 133 – "Ariba" (Roger Schmidli - rec. by Daryl McKenzie Jazz
Orchestra) – Altos add weight to trumpets, tenor/ bari add weight to trbs.

Example 134 - "Still Workin' It" (Daryl McKenzie) – Tutti ensemble -saxes
doubling existing brass notes.

Example 135 – "Still Workin' It" (Daryl McKenzie) – Saxes add linear motion.

Example 136 "Gotta Be My Way" (Sammy Nestico)

Discussion: Don Sebesky's Voicing Exercise

The following discussion is extracted from *The Contemporary Arranger* (Sebesky, 1975). It has been included in its entirety as it is a valuable exercise.

> As the basis for this discussion of big-band voicing, the short swing passage that illustrated the brass combinations earlier will be used again. Example 137 combines eight brass and five saxophones in an attempt to achieve the kind of sound generally associated with the Count Basie and Woody Herman bands.
>
> Points to note:
>
> A) The saxes are voiced compactly in the high register in order to reinforce the trumpets, which are in their middle register. Notice the absence of chordal roots.
> B) The saxes hit a low pedal tone momentarily. The brass are in unison, for contrast, and to avoid having the low trombones clash with the top saxophone note.
> C) The saxes are spread out a little more now, for richness and to prepare the ear for the next two chords, which are voiced in open position. The saxes have not moved strictly parallel with the brass, which is permissible. The only notes not doubled by the brass in the low register are the second tenor's F and E. These notes are included in order to give the sax section a complete chord. Notice the chordal roots (Bb & A) doubled by the baritone sax and fourth trombone—an exception to the general rule because of a need for chord completeness within the sax section.
> D) The saxophone voicing is now drastically different. The section is divided into three lines. The baritone doubles the bass trombone. The altos and tenors are voiced in sixths, for good internal resonance; the tenors giving support to the first trombone (who is all alone), and the altos starting out doubling the second trumpet a sixth above. Notice how the alto line deviates from the second trumpet line momentarily on the third beat of bar five, creating a more interesting melody.
> E) In bar six, we avoid the low register in order to inject a little textural contrast between bars five and seven.
> F) In the last two chords in bar six, the baritone is all alone. Here again, this voicing was chosen for its completeness within the section.
>
> G) Notice the absence of fifths (Ab and G) in the last two chords. As mentioned earlier, these chordal tones can sometimes weaken the vibrancy of a voicing.
> H) The first tenor is all alone on the F# in its middle register. Again, I chose this voicing for maximum vibrancy and completeness of sound within the section.

The voicing used here is designed to produce a lean, vibrant sound, with the emphasis on the rhythmic aspect of the musical phrase. In other words, above all else, swing!

Several factors contribute to this end. Logical voice leading and continuity of melodic line (as mentioned earlier) are extremely important in trying to achieve an effective big-band swing feeling. Notice the relatively simple harmonic structure; four-note chords predominate.

There are a few five-note chords at emphasis points, and only two six-note chords at the final cadence.

As a general rule, the simpler the harmonic content, the more vibrant the overall sound will be. The reason for this should be fairly obvious. If you have only four tones in a concerted chord, played by thirteen instruments, each note of the chord will be duplicated—and thus reinforced—several times.

Notice how the saxophones are voiced in relation to the brass: overlapping the trumpets and trombones, lending support in various ways according to the bend and flow of the music, always as an element added to the brass, not integrated with them. In passages played at a volume of forte or louder, saxes generally are not able to project with the same degree of intensity as the brass. Consequently in large ensembles of this kind, the brass section should be voiced as a separate entity, and the saxophone section then added to the brass, giving support where it is needed most, yet voiced in a way which will also enable it to sound complete within itself while still contributing to the overall ensemble sound. This is extremely important when your ensemble combines instruments of different timbre and projection, especially in a recording studio. Normally, when recording a mixed instrumental group, a separate track is allocated to each section, isolating it to a degree, until the recording session is finished. At that time, the individual sections are balanced and mixed together to create a unified overall sound.

Despite this mixing of elements, one section or another may predominate momentarily, slightly disrupting the blend; this is unavoidable. If the individual sections are scored in a way which will enable them to sound as complete as possible within themselves, however, momentary variances in overall texture will be less noticeable. In large brass sections of eight or more players, it is also possible to treat the individual trumpet and trombone sections as separate (but conjoined) entities. As the size of the brass section diminishes, however, this becomes impossible.

Compare Example 137 with Example 138 - the same phrase voiced incorrectly.

Points to Note:
There are many common voicing errors in this example:

A) One basic fault throughout this whole passage is illustrated in the first few beats; the persistent overuse of chordal root tones in the baritone sax. This practice results in a thick, overripe sound, quite the opposite of the lean sound we have been trying to achieve. Also contributing to the effect is the rather low register in which the entire sax section is voiced, giving no support to the trumpets.

B) The lead alto, wedged in between the fourth trumpet and first trombone, is playing the ninth of the chord (E) all by itself. Not only will this be lost in the overall sound, but it also interrupts its doubling of the lead melody for no good reason.

C) This voicing for the saxophones will sound incomplete and unsatisfying within the section, largely because of the wide space between the second tenor and the baritone. Also, the two chordal minor ninths (Ab), which are already duplicated in the brass will tend to make the ensemble sound harsh.

D) This low C (together with the preceding low root tones) negate the effectiveness of the saxophones' G pedal on the second beat.

E) The trombone section, voiced in four-way chords (unlike example 131 in which they were in unison) intrudes upon the top saxophone G, thereby negating its effectiveness.

F) Here we have two chordal fifths in the saxophones. A very bland, unsatisfying sound for this kind of a swing passage.

G) The saxes duplicate the trumpets an octave lower, filling up the holes we left before in this place. Not only does this negate the contrasting open effect we achieved before, but it also smothers the ascending trombone counter line in bar five.

H) Here the chordal root Ab was inserted in place of the connecting F#, destroying the effect of contrary motion.

I) The baritone continues to stay in the low register—not enough contrast

J) The saxes, instead of helping the top trumpets, who are in a fairly low register, duplicate the already strong trombones, emphasizing the line E, Eb, D—much too weighty. Also, the extreme low register in the baritone, to some degree, weakens the overall effect of the short drop.

K) The voice leading in the second and third trumpets is bad here.

L) The baritone doubles the bass trombone, giving unnecessary weight to the chordal root One or the other can handle it easily, not both. The last two saxophone chords are very awkward. Notice the way the sax notes are placed in between the brass notes Here an attempt was made to integrate the saxes with the brass, making the sax section less effective as a separate entity, and disturbing the clarity of the total ensemble sound. (Sebesky, 1975, pp. 74-79)

Example 137 - Sebesky

Example 138 Sebesky

Exercise

Tutti Voicing Exercise

Chapter 10 - Advanced Big Band arranging concepts and analysis

Many conventions have been established in basic arranging methods to ensure that beginner arrangers stay out of trouble when voicing sections of the big band. The main disadvantage to following these methods is that a limit is reached in the amount of harmonic colour and tension that can be drawn from such voicings. More advanced and experienced arrangers often push the boundaries and break the rules in order to achieve a sound that they are searching for. In studying arrangers such as Thad Jones and Bob Brookmeyer, the aspiring arranger can learn how the conventions can be broken, when it is appropriate to do so, and then introduce some of these concepts into their own writing, always remembering that such writing needs great players for great results.

10.1 Thad Jones

Basic Convention: In a dominant 13th chord, the 5th should be omitted (especially if the #11 is used). Normally the 5th, a non-colour tone, can disturb the internal resonance of the 13th chord. If the 5th is used, it should not be in the same octave as the 13th.

Thad Jones breaks this convention in bar 20 of "Three and One" where the 5th and 13th are adjacent in the trumpets. The logic of this can be seen when considering the effect on the voice leading had the 5th been omitted. Trumpets 3 and 4 would have had leaps of a 6th compared to a 4th in the lead part. *(Examples 139 and 140)*

Basic Convention: In any chord with extensions (i.e., more than triadic), the tonic should only be used in the bass part or melody. The tonic is considered a bland note if used in an octave above the bass part.

In the same arrangement, on the first beat of the following bar, a tonic can be found in the 4th trumpet part in an already colourful chord. Once again, voice leading dictates the use of this note. *(Example 140)*

Basic Convention: A sharp 9th (#9) should never be voiced in the same octave as the major third. This would cause a semitone grind and confuse the tonality of the chord. The #9 would not be heard as an extension, rather as a minor 3rd.

The same chord just discussed contains a #9 adjacent to a major 3rd. Thad Jones is looking for extra colour intentionally. *(Example 140)*

Basic Convention: A flat 9th (b9) should never be voiced in the same octave as the tonic. This also creates a minor 2nd grind.

Example 139 – "Three and One" – Thad Jones (CD: Mel Lewis Jazz
Orchestra" The Definitive Thad Jones, Live from the Village Vanguard Vol.1")

Example 140 – Bar 20 of "Three and One" – Thad Jones (CD: Mel Lewis Jazz
Orchestra" The Definitive Thad Jones, Live from the Village Vanguard Vol.1")

Three bars earlier (bar 17) this rare use of tonic (3rd trumpet) and b9 (alto saxes) can be found. In same chord, the next basic convention is broken in the trombones. In both instances, extra tension is achieved. *(Example 141)*

Basic convention: A 13th should not be voiced in the same octave as the flat 7th. This creates a minor 2nd dissonance.

Once again this convention is broken to intentionally achieve dissonance. *(Example 141)*

Basic Convention: When altering the 9th of a chord use either a #9 or a b9, not both, Similarly, the altered 5th is treated the same way. This may be considered a guide for beginning arrangers that is overlooked fairly quickly as the resulting colour is not too dissonant. Bar 142 shows another example of 3rd against #9 and a tonic in an upper voicing.

Thad Jones frequently uses both alterations of the 9$^{th.}$ One such example is found in bars 90 to 93. In the first three instances, the b9 is in the trombones and the 39 is in the trumpets. In the last instance, they are both found in the trumpets while the trombones play the basic 7th chord. *(Example 142)*

Bar 146 shows further examples of 3rd against #9 and the rare tonic against b9. *(Example 143)*

Note that when listening to recording of this section (bars 142 to 149), the energy level of the arrangement is building at this point.

A further example of the simultaneous use of #9 and b9 can be found in the dense brass voicings of Thad Jones' chart "Us". Also the use of 5^{ths} in the same octave as 13^{ths} and the use of tonics high in the voicing can be found. The longer durations of these chords gives the listener a chance to hear these colours better. Note how the altered 9^{ths} are organized so that the trumpets and trombones each make harmonic sense by themselves. *(Example 144)*

The Thad Jones chart "Tiptoe" ends on a very tense sounding chord. *(Example 145).* The piano part indicates an Ab diminished chord. Close examination of the voicing reveals several non-chordal tones. Each of these added tones are designed to add a minor second dissonance against a chordal tone. The concert pitch Bb melody note can be considered an extension of the basic chord – a common method of arrangers to enhance the dated sound of a pure diminished chord.

Example 141 – Bar 17 of "Three and One" – Thad Jones (CD: Mel Lewis Jazz Orchestra" The Definitive Thad Jones, Live from the Village Vanguard Vol.1")

Example 142 – Bars 90 – 93 of "Three and One" – Thad Jones (CD: Mel Lewis Jazz Orchestra" The Definitive Thad Jones, Live from the Village Vanguard Vol.1")

Example 143 – Bar 146 of "Three and One" – Thad Jones (CD: Mel Lewis Jazz Orchestra" The Definitive Thad Jones, Live from the Village Vanguard Vol.1")

Example 144 –Bars 58-63 of "Us" – Thad Jones (CD: Tad Jones -Mel Lewis "Consummation")

Example 144 (cont.)

Example 145 –Coda of "Tip Toe" – Thad Jones (CD: Tad Jones -Mel Lewis "Consummation")

10.2 Bob Brookmeyer

Bob Brookmeyer has a distinctive way of artistically ignoring the conventions already discussed but often takes them to a higher level. Brookmeyer when asked about the dissonant intervals he uses said, "If I think about it I'll see shapes of lines, actual geometric feelings of pressure, of building". "When I hear a major 7th, it sounds like it's pressing down and a minor 9th seems to be expanding, so they have shapes for me and I keep the shapes I like".

Brookmeyer's chart of "Hello and Goodbye" is full of such examples.

Basic Convention: avoid the harsh interval of a minor 9th by always voicing a #11 above a 5th, a 9th above a minor 3rd, a 13th above a b7, a major 7th above a tonic, and a #9 above a major 3rd.

Consider bars 229 to 232 *(Example 146)*. This convention is ignored intentionally several times creating parallel minor 9ths. This biting dissonance has been saved for the final shout chorus of the chart. In the following bar, the basic convention of altered ninths and fifths can be taken one step further:

Basic Convention: If altering a 5th or 9th, the natural 5th or 9th should not be used. Brookmeyer deliberately uses simultaneous 5ths and #5ths.

In bar 237 the dissonance gained by using the minor third above the 9th is further increased by doubling the dissonance in the lower octave. *(Example 147)*

In bar 250 minor 9ths can be found between 1st trumpet and 1st trombone. They work because each voice is playing a strong line of its own. The last beat of the bar shows another basic convention ignored. The use of simultaneous #9, b9 and the natural 9 would normally be forbidden. It works here as a cluster impact chord and each of the dissonant voices (1st tenor, 3rd trumpet and 4th trombone) have naturally singable lines in and out of the dissonance. *(Example 148)*

Note that the dissonant or contradictory minor 9th intervals were freely used by serial composers of the 1950's. These intervals can be found in Bussotti's "Pieces de Chair II" and Pousseur's "Exercises pour piano".

Example 146 - "Hello and Goodbye" (Bob Brookmeyer CD: Mel Lewis and the Jazz Orchestra - "Bob Brookmeyer, Composer, Arranger") (bars 229 to 232)

Example 147 – "Hello and Goodbye" (Bob Brookmeyer CD: Mel Lewis and the Jazz Orchestra - "Bob Brookmeyer, Composer, Arranger") (bars 237 to 238)

Example 148 - "Hello and Goodbye" (Bob Brookmeyer CD: Mel Lewis and the Jazz Orchestra - "Bob Brookmeyer, Composer, Arranger") (bars 250 to 251)

Basic convention: Suspended Dominant 7th chords contain the 4th and not the 3rd. To have both would be a contradiction.

Brookmeyer uses 3^{rds} against 4^{ths} in bars 51 and 52 creating a disturbing situation *(Example 149)*. Other writers have used this technique including Oliver Nelson and David Springfield in the final cadence of his "Prelude and Mood" (Kendor). Stravinsky used this sound, also Berio in the fourth movement of "Sinfonia". This passage also briefly demonstrates another Brookmeyer method that could be dubbed "Synthetic Harmony". Harmony that is not easily identifiable as an idiomatic jazz chord can be found numerous times in the literature of 20th century composers. One chart of Brookmeyer's ends with the chord "C everything". Berio uses a near panchromatic chord in the third movement of "Sinfonia". Panchromatic chords can be found in Xenakis' "Metastasis", Penderecki's "Threnody for the Victims of Hiroshima" and Gorecki's "Scontri".

Basic convention: Always try to maintain and interval greater than a second between the melody and the next lowest voice. Our perception of the melody can be confused by intervals of a second.

This same passage is a good example of how Brookmeyer successfully uses intervals of a 2nd at the top of a voicing. *(Example 149)*

Bar 46 of the chart "ABC Blues", which uses 12-tone sequences over blues changes, is also an example of a minor 2nd interval at the top of a voicing and the use of simultaneous 3^{rds} and 4^{ths}. In this example the effect is exaggerated by doubling the dissonance an octave lower. Brookmeyer only uses this effect when the harmony is static. *(Example 150)*

10.3 Maria Schneider

The chord in bar 140 of Maria Schneider's "Bird Count" (1992) shows the influence of Thad Jones and Bob Brookmeyer's writing of 10 to 20 years earlier *(Example 151)*. Note the #9 (tenor 1) adjacent to the 3rd (alto 2). Also the b9 (trumpet 3) adjacent to the tonic (trumpet 4). The trombones also contain simultaneous b5 and #5.

The scores to Maria Schneider CD "Evanescence" have been published in a book (Sturm, 1998). The score of "Gush" reveals some interesting voicings in bars 100 – 102 *(Example 152)*. Note the minor 9th interval between 1st trumpet and 1st trombone.

Example 149 – "Hello and Goodbye" (Bob Brookmeyer CD: Mel Lewis and the Jazz Orchestra - "Bob Brookmeyer, Composer, Arranger") (bars 51 to 52).

Example 150 - "ABC Blues" (Bob Brookmeyer CD: Thad Jones/Mel Lewis "Body and Soul") (bar 46).

Example 151 - "Bird Count" (Maria Schneider, CD: "Days of Wine and Roses")

Example 152 - "Gush" (Maria Schneider, CD: "Evanescence")

Summary

Breaking the basic rules of arranging is nothing new. The arrangers of the Stan Kenton band of the 1950s developed a technique dubbed the "random note method" where a random non-chordal tone was inserted into a standard voicing in order to gain extra tension and harmonic colour. A reviewer on a Kenton gig said that the brass section nearly blew out the back wall of a club they played with the huge brass dissonances. The 20th century composers in searching for new sounds influenced the jazz composers with their disregard for traditional harmony. These days the sound of the mainstream writers such as Sammy Nestico and Billy May tends to sound bland when compared to the writing that contains the advanced techniques in this discussion.

The serious arranger should investigate the works of the great arrangers such as Bob Brookmeyer, Duke Ellington, Gil Evans, Bob Florence, Neil Hefti, Dave Holland, Bill Holman, Thad Jones, Quincy Jones, Rob McConnell, Jim McNeely, Henry Mancini, Frank Mantooth, Billy May, Bob Mintzer, Sammy Nestico, Lennie Niehaus, Nelson Riddle and Maria Schneider.

Chapter 11 – Orchestration

11.1 Orchestration Basics

In the introduction to this book, it was pointed out that orchestration was the assigning of notes to instruments. In most cases, the Orchestrator does not have the task of composing or arranging the work to be orchestrated (don't change anything). While the composition needs to be strong enough to convey the

> ✪Tip: "Orchestrators can make or break you" – Bill Broughton

musical message without relying on the orchestrator, the orchestrator can still have a huge artistic input into the final work. Some arrangers consider the orchestra easier to work with than the big band, as there is a wider variety of colours available.

Definition of an Orchestra

Any combination of instruments larger than a chamber group. Usually implies the inclusion of strings. If there are no strings we usually use the term "band".

Constitution of an Orchestra

The constitution of the modern symphony orchestra is:

Woodwinds - 2 flutes, 2 oboes, 2 clarinets and 2 bassoons.
Brass - 4 horns, 3 trumpets, 3 trombones and tuba.
Percussion (4 players) – tympani, bass drum, snare drum, cymbals, glockenspiel, xylophone, etc.
Strings - 1st violins (8 to 15), 2nd violins (8 to 15), violas (6 to 12), cellos (6 to 12), double basses (4 to 8) and harp.

Other instruments can include piano, celeste, organ, guitar and saxophones.

The above woodwind list is referred to as 'double woodwind' as there are pairs of instruments. In a 'triple woodwind' section there would be additional players - piccolo, cor anglais, bass clarinet and contra bassoon. There can be other combinations found however.

Occasionally other brass instruments can be required such as cornet, euphonium and piccolo trumpet.

Score Order

Traditionally, the instruments of the orchestra are placed in order down the score.

The correct score order is:
Flutes
Oboes
Clarinets
Bassoons
Horns
Trumpets
Trombones
Tuba
Tympani
Percussion
Other Instruments (Harp, Piano)
1st Violins
2nd Violins
Viola
Cellos
Double Basses

> ✪ "If you want to learn about orchestration, take a look at Ravel's scores." – Buddy DeFranco

Note that the piccolo goes above flute 1 (unless it is doubled by flute 2) and that cor anglais, bass clarinet and contra bassoon go below their other family instruments.

Bar lines do not go all the way down the page - they are used to help group sections visually. All instruments must be listed on the first page of the score but then only on following pages, as they are needed.

11.2 Scoring For Strings

The range of the strings is shown in Example 153. Note that the upper register on all string instruments can cause problems with intonation in the hands of less experienced players. The violas are written in alto clef except in the highest register. The cellos are in bass clef except in the upper register where they are written in tenor clef (traditionally) or treble clef. Each individual string has a different tonal quality. Sometimes this can be exploited (e.g., the term *sul G* on a violin part directs the player to remain on the G string rather than going to the usual D string).
As there are a number of players on each string part, a division of notes is possible expanding the texture of the strings. The term *divisi* is used.
String players naturally play with vibrato. On occasion they can be directed to play without vibrato (*non vib.*) producing a colder sounder suitable for tension in a movie score for example.
String players alternate up and down bows. The bowing can be directed by the orchestrator or left to the concertmaster to direct the strings. There are composers who like to mark their own bowings. Hans Keller (1981) argues that the master composers from centuries ago did not mark bowings and some more recent composers should not have either. Hollywood conductor Bill Broughton said that it saved time if he did the bowings and therefore saved money.

Some orchestral bass players have either a 5-string double bass, with an extra low B string, or an extension on the fingerboard allowing the low E string to extend down to C. This can be useful in movie scoring if some of the bass section can play these lower notes.

There are various colour effects as demonstrated on the accompanying CD:
Double Stops (playing two strings simultaneously).
Triple Stops (three strings simultaneously).
Quadruple Stops (four strings – usually arpeggiated due to the curve of the strings).
Harmonics (playing lightly at a node point – either natural or artificial).
Sul Tasto (bowed further from the bridge - velvety / transparent).
Ponticello (bowed close to bridge - glassy / chilling).
Col Legno (strike strings with the back of the bow).
Trills (minor or major 2nd) and Fingered Tremolo (greater than a major 2nd)
Bowed Tremolo (fast alternating of bow direction).
Portamento (Glissando) and Portamento with bowed tremolo.
Pizzicato (plucking strings).
Muted violin (the mute clips to the strings at the bridge).
Legato Bowing (bow does not leave the string) (marked with slurs)
Detache (bow does not leave the string but bowing alternates) (marked with a tenuto marking).
Loure or Parlando (played with one bow but with a slight pause on each note). (marked with a slur and tenuto).
Staccato (crisp and detached).
Spiccato (mark with staccatos).
Jete (Bouncing Bow) (light staccato - mark with a staccato and slur).

The Standard String Section

Depending on the required sound, a string section can be as small as 4 strings and anywhere up to 62 or more for large symphonic orchestra. Above a string quartet (2 violins, viola and cello), it is important to keep the ratio of instruments the same. As a rough guide, these ratios should be kept:
 3 violins = 2 violas
 4 violins = 2 cellos
 3 violas = 2 cellos
 2 cellos = 1 double bass.
It is advisable not to use strings in pairs (e.g., two violins on one part), as intonation can be a problem. With more strings the intonation averages out.

Further Listening:
    Tchaikovsky: "Romeo and Juliet – Love Theme" – violas and "Swan Lake - Dance of the Cygnets" - pizzicato.
    Britten: "Young Person's Guide To The Orchestra" Variations E, F, G and H + Theme D – all strings demonstrated.
    Berlioz – "Symphony Fantastique" II bars 1- 36 - harp.

Samuel Barber "Adagio for Strings" – strings in extended registers and at a wide range of dynamics.

Strings as a Section

The following section discusses different voicings for strings using two bars of Bach's "Jesu, Meine Freude". (Listen to a choral version of these two bars on Youtube: http://www.youtube.com/watch?v=XVa3nR-2bVc) Note the dynamics used in each example.
Example 154 is the obvious distribution of the parts. Example 155 gives more weight to the melody by using both Violin parts. The violas must be marked up a dynamic but this may not be suitable for nonprofessional groups. Example 156 divides the cellos instead. Example 157 puts the 1st violins and violas on the melody for mixed colour. Example 158 puts the cellos on the melody but this may be considered too lush and romantic in some situations.
Octave doublings can enhance the sound of the string section.
Example 159 has the melody doubled an octave higher in the 1st violins. Example 160 also has the alto and tenor voices doubled in the 2nd violins and violas. Example 161 has the melody doubled an octave lower in the cellos. Example 162 has doubling melody, alto and tenor an octave higher - also the melody an octave lower.

As a general rule:
The bass notes should only be doubled an octave lower.
Both the alto and tenor parts should be doubled an octave higher rather than only one (which results in a succession of open 4^{ths} and 5^{ths}).

When a primary triad (I, IV or V) is in 1st inversion, the bass should not be doubled in the upper parts. The same applies to 7th chords in any inversion.

The Harp
Considered a member of the string section, the harp is a unique instrument in appearance, construction and sound. It has a large range *(Example 163)* and is equipped with a pedal system making chromaticism difficult. A detailed discussion of the harp is beyond the scope of this book. Even Stravinsky wrote unplayable harp parts in the "Firebird Suite". Nelson Riddle was a great writer for harp as he studied the works of Ravel and Debussy.

Further study:
    Don Sebesky – "The Contemporary Arranger" (p.118)
    Nelson Riddle – "Arranged by Nelson Riddle" (p.82)
    Sammy Nestico – "The Complete Arranger" (p.144)

Further listening:
    Don Sebesky's arrangement of "Day By Day" -strings with and without harp.

Example 153 - String range chart.
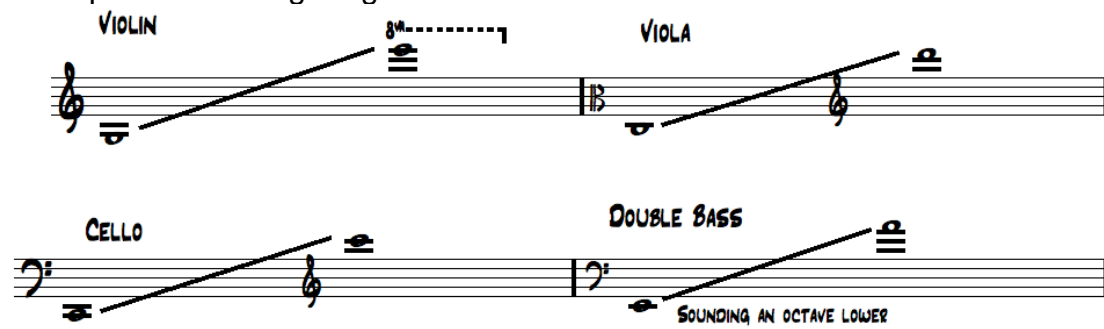
Examples 154 and 155 "Jesu, Meine Freude"(Bach).

Examples 156 and 157 "Jesu, Meine Freude"(Bach).

Examples 158 and 159 "Jesu, Meine Freude"(Bach).

Examples 160 and 161 "Jesu, Meine Freude"(Bach).

Example 162 "Jesu, Meine Freude"(Bach).   Example 163 range of the harp.

11.3 – Orchestral Woodwind

Example 164 shows the ranges of the orchestral woodwind instruments. Extremes of ranges (especially upper ranges) can cause intonation problems. Always remember that saxophone players often have limited woodwind technique and care must be taken when writing woodwind-doubling parts.

The lower middle register of the piccolo is delicate and sweet while the upper register is extremely penetrating. The flute has a dark, rich low register but without much projection. The middle register is clear and the upper register is brilliant. Most flutes also have a low B key.
The lower range of the clarinet (the chalumeau range) is dark and woody, the middle range is pale and cold, the upper middle register (clarion register) is bright and vibrant) and the high register is shrill and piercing. The upper register of the bass clarinet can sound tense and strained.
The lower register of the oboe can be coarse and the extreme upper register is difficult to control. The cor anglais by contrast has a beautiful sound in the low register. The bassoon's low register is thick and strong, the middle register is vibrant and the upper register becomes tenser. The contra bassoon is more difficult to control, especially soft passages in the low register.

Other woodwind instruments such as the alto and bass flute, Eb clarinet, alto and contra bass clarinets are used occasionally in orchestral writing. These instruments are more commonly found in symphonic wind band writing.

Further Listening:
"Bolero" (Ravel) – two piccolos.
"Example 11" (from Don Sebesky's book "The Complete Arranger) – Seven Brass with Piccolo.
"Young Person's Guide To The Orchestra" (Britten) Variations A, B, C, D, Theme B – woodwinds demonstrated.
"Dance of the Sugar Plum Fairy" from the Nutcracker Suite (Tchaikovsky) – bass clarinet.
"Iberia" (Debussy) – 2 oboes (at the opening).
"Symphony in E minor (New World)" (Dvorak) – cor anglais solo.
"The Right of Spring" (Stravinsky) – solo Bassoon.
"The Sorcerer's Apprentice" (Dukas) – contra bassoon.
"Example 15" (from Don Sebesky's book) - 16 strings with and without flute."
"Firebirds/Birds of Fire" (Don Sebesky CD; Giant Box) - strings doubled with clarinets.
"Road Time Shuffle" (Toshiko Akyoshi CD: Tales of a Courtesan) – mixed woodwinds including piccolo and alto clarinet.

11.4 – Orchestral Brass

The range and transposition of the orchestral brass were discussed in chapter 9. When scoring for brass in an orchestral setting, the upper registers

(especially trumpet) are not used as frequently and certainly the extended upper registers are rarely used. Trumpets of other transpositions (C, D, Eb etc.) exist which can be utilized for a baroque type sound. It is common to write trumpet parts in C and allow the player to transpose. Alto, soprano and contrabass trombones exist but are not widely written for.

It should be noted that for any unusual instruments, it's worth checking with the player or orchestral contractor to see if the instrument is owned and can be played to the level that you intend to write. Many composers such as Cezary Skubiszewski, Maria Schneider and Bruce Broughton enhance the orchestral sound with exotic ethnic instruments.

When writing French horns with trombones, a simple formula to use is 2 horns = 1 trombone. Using 2 horns in unison (or 4 horns in pairs) above a voiced trombone section gives a warm, sonorous sound.

Further Listening:
"Rondo: Allegro Molto from Concerto for Trumpet and orchestra in E-flat Major" (Hummel)
"Rondeau" (Mouret) – baroque style trumpet
"Flight of the Bumble Bee" (Rimsky Korsakov rec. by Christian Lindberg CD: 10-year Jubilee) – virtuoso trombone technique.
"Goodnight" (Berio rec. by Christian Lindberg CD: 10-year Jubilee) – alto trombone solo.
"Jimmy Buffington Demonstrates French Horn Sounds" (Don Sebesky's "The Contemporary Arranger").
"Capriccio for Solo Tuba" (Penderecki CD - Roger Bobo: Tuba Liberia) – virtuoso tuba playing.
"Great Gate Of Kiev" (Mussorgsky trans. Howarth – CD: Summit Brass – "Delights") – large brass ensemble writing.
"Unison viola, cello and clarinet with and without horn" – (from Don Sebesky's book.)

11.5 Scoring Chords for Orchestral Sections

Woodwind

Juxtaposition voicings for woodwind are used frequently. Interlocking mixes the colours but can result in weak notes. Enclosure is not successful for woodwinds as two similar instruments end up in different registers. Overlapping was in vogue in the classical period but outer notes, especially at the bottom, are weak. *(Example 165)*

In Example 166, the 2nd flute is weak in the interlocking voicing. There is too much difference between the tone of the two flutes in the first enclosure voicing and so the second voicing if better as two different instruments

enclose the clarinets. The second overlapping voicing will give a better balance than the first.

Factors involved in choice of voicing style include - range, voice leading, instruments involved, chord quality, and the colouring desired.

For woodwinds, close spacing in upper parts is desirable. At one time larger gaps were arranged; this is not commonly used today. The octave doubling of the top voice is often used however.

When there are both stationary and moving voices involved, it is better to give the stationary voices to one colour and the moving voices to another. *(Example 167)*

For triple woodwind sections, juxtaposition works best. Interlocking is very unsuccessful as it pushes instruments of a kind too far apart. Complete duplication, with three of each woodwind, allows for a uniformly mixed colour in three note chords. *(Example 168)*

Further study:
    Kennan's *The Technique of Orchestration* p.160 illustrates large woodwind section voicings.

Brass

Juxtaposition, Interlocking and Enclosure all work well. Overlapping is rarely seen though a low trumpet note is sometimes overlapped by a trombone or horn for better balance. In Example 169 the interlocking of trumpets and horns found in the first chord would not work in the other two, as the 1st horn would end up with a high note. The third chord is a fuller version of the second chord. The horns may be marked *f* to balance the other brass.

Further study:
Kennan's *The Technique of Orchestration* p.162 illustrates large brass section voicings including 3 trumpets.

Strings

Strings work best when voiced either in juxtaposition or interlocked. *(Example 170)*

Interlocking allows for a more homogenous blending of string tone. *(Example 171)*

Further study:
    Kennan's *The Technique of Orchestration* p.164 to illustrate large string section voicings.

Example 164 – woodwind ranges.

Example 165 – woodwind voicing styles

Example 166 – woodwind voicing styles

Example 167 – stationary voice with moving lines.

Example 168 – triple woodwind in overlapping voicing.

Example 169 – Brass chords (2 trumpets, 4 horns, 3 trombones and tuba)

Example 170 – Strings in Juxtaposition (from Beethoven's Seventh Symphony – last movement, Letter A)

Example 171 – Interlocking in version A is better than juxtaposition in version B.

11.6 Chords for the Orchestra

The orchestrator must consider the weights of each section at different dynamic levels. If we arrange each section to sound complete and balanced, the composite sound is bound to be good.

Often we don't want the upper woodwinds in the same register as the trumpets (more powerful) and so place them in a register above the trumpets where they are more powerful and brilliant. This results in a gap in the middle of the woodwind chord - alone this is not satisfactory but is effective when combined with brass and strings.
The same principal applies to the strings - sometimes they play the complete chord - other times they reinforce certain notes of it. Unlike the woodwinds, they are frequently arranged in open spacings.

Further study:
> Kennan's *The Technique of Orchestration* p.166 illustrates large string section voicings, p.167 illustrates some orchestral chords and pp.187-191 tackle a practical exercise in scoring for woodwind, horns and strings.

11.7 Dissonances and Doublings

Dissonances appear more prominent and acute when given to the same type of instruments and are milder with different instruments. For example, two trumpets in semitones appear more dissonant than one trumpet and one violin.

The possibilities of doublings in an orchestra are endless. In general, doubling woodwinds in unison with brass makes the brass tone less transparent and brilliant. Clarinets and flutes soften the trumpet tone while oboes accentuate the nasal quality. Clarinets in chalumeau register add a rich dark touch to the brass. Bassoons doubled with horns or trombones make those colours a little grayer and opaque (the bassoon colour is largely absorbed by the brass).The oboe and a stopped horn or muted trumpet have similar tones and can be combined in a chord (on different notes) well.

In unison doublings of woodwinds and strings, the woodwind tone tends to be overshadowed by that of the strings. Flute chiefly adds body, although not much. Oboe makes the string tone a bit more nasal and may even give it a pinched quality if the number of strings is small. Cor anglais, on the other hand, can be combined with violas to produce an unusually poignant and attractive tone. One such example is the love theme from Tchaikovsky's "Romeo and Juliet" where the clarinet lends a certain warmth and roundness to the string timbre, plus a dark richness in its lower register. Bassoons are constantly associated with cellos or violas for the sake of added body. The unison combination of horn and cello in the tenor register gives an expressive, noble sound that is well suited to slower, cantabile melodies.

Certain doublings in which a woodwind (or pair of woodwinds) plays one octave and strings another are effective and allow the woodwind tone to be heard more clearly than it is in unison doublings. Flute above violins is good; clarinet or oboe above violins less satisfactory. But clarinets or bassoons can play an octave below violins with good effect. The combination of woodwinds in octaves plus strings in octaves is a powerful and useful one.

Remember that too constant use of mixed or composite colours becomes uninteresting and tends to make a score sound opaque and nondescript. Pure colours are needed for sparkle and transparency.

Chapter 12 – Transcriptions, Concert Bands and Arranging for Voices

12.1 Problems in Transcribing Piano Music

Certain features are pianistic rather than orchestral and so a literal transcription can be awkward technically and/or ineffective.
The key may also need to be changed from the original to something more suited to the orchestra. Sustain (damper) pedal markings in piano parts need to be taken into consideration. Sometimes long runs of notes will need to be broken up between instruments and a dovetailing technique will give a more satisfactory result.

Further study:
> Kennan's *The Technique of Orchestration* pp.173-174 shows a Chopin example where the sustain pedal has been taken into account. The Beethoven example (p.175) shows the redistributing of notes to close the gap between the hands in the piano part. The Griffes example (p.176) has a left hand passage that is not playable by one instrument and has been rescored accordingly. Note the use of the dovetailing (overlapping) technique for the longer passages - this would normally be supported by sustained harmonies in other instruments. The Ravel example (pp.182-183) is an excellent example of some possibilities in scoring for strings, woodwind and horns.

When scoring for orchestra, use the orchestra to bring out individual voices clearly by using the colours available - within sections and, if carefully balanced, between sections. It is also possible to contrast composite colours. Wagner's "Die Meistersinger" (p.263) is such a case using three elements –
1. flute, oboe, clarinet, 3 horns, violins II, violas
2. clarinet, violins I, 1 horn, cellos
3. bassoons, tuba, basses
Each element is produced by at least one woodwind, one brass, and one string colour. Each composite colour matches and each section is complete.

Example 172 is one possible solution to the orchestration exercise. If this exercise were given to ten orchestrators, there would be ten different solutions.

In orchestrating fugues, and polyphonic music in general, there should be no octave-doubling of inner parts where such doubling would cause crossing of parts, which would result in harmonic confusion. The top and bottom parts may, however, be doubled at the higher and lower octave respectively.

When working this example a good balance in the brass department should be taken care of first. After that the strings are added, one part to each of the five voices, the 1st violins an octave higher than in the original and the double

Orchestration Exercise:

Orchestrate the following piano passage for an orchestra consisting of:
"triple" woodwind, 4 horns, 3 trumpets, 3 trombones, tuba, tympani (2 drums),
percussion (bass drum & cymbal), strings.

In scoring this piece, the two most important considerations are:

1. To ensure that each entry is well defined and emphasized.

2. To arrange things so that every voice, after having entered, is of
approximately the same strength as every other.

You do not have to use every instrument available.

If you work in concert pitch, please indicate which instrument is to be used if
there are choices (e.g., clarinet in A or clarinet in Bb).

Remember to use dynamics where needed.

Example 172 – solution.

basses an octave lower. The woodwinds double the brass and string parts. The manner in which they do this should be carefully observed.

The student should also note the way in which consideration 1) referred to above has been carried out.

12.2 Transcribing for the Concert Band

Transcriptions have always been used in instrumental music. Bach was one of the first ignificant composers to transcribe his music for several different instrument groups. Other significant composers to transcribe works include Ravel, Schoenberg and Stravinsky. In the 1950s original music for concert band (or symphonic wind band) was in short supply. There were however many good quality transcriptions of orchestral works available. The American conductor Richard Franko Goldman wrote:

> The wisest arranger is the one who takes adavantage of the characteristics of each instrument and does not try to substitute for another. The practical problem is how to accomplish this while preserving somehow the characteristics of the music one is arranging or transcribing. (Goldman, 1961, p. 170)

As a basic rule, if a piece is written well in one idiom, it should work well in another by applying the same fundamental rules. One of the problems of the Concert Band however, is the lack of a string section when transcribing orchestral material and the orchestrator has a difficult task in making elements of string technique work in a purely woodwind and brass setting.

The 'Brass Band' (the traditional British band of brass instruments and percussion) presents another set of problems with no strings or woodwinds. The experienced orchestrator will know how to find tone variation within the band including the use of mutes.

Further listening:
> "Pictures at an Exhibition" (Mussorgsky arr. Hindsley) recorded by The University of Illinois Concert Band on "The Hindsley Legacy" [CD]. Homewood, Illinois: Mark Custom (1999). – also compare with the orchestral transcription by Ravel.
> "Carmina Burana" (Orff arr. Krance) recorded by Peabody Conservatory Wind Ensemble on "Orff: Carmina Burana Suite; Bird: Serenade for Wind Instruments; Reed: La Fiesta Mexicana" [CD]. Hong Kong: Naxos (2006) – exciting scoring combinations and declamatory solo parts.

Further study:
> "The Complete Arranger" by Sammy Nestico – Chapter 13
> "Scoring for the Band" by Philip J. Lang (Belwyn Mills Publishing)
> "Band Scoring" by Joseph Wagner (McGraw – Hill)

12.3 Arranging For Voices

Example 173, from Bach's masterpiece, "Jesu, Joy of Man's Desiring" (Cantata number 147) illustrates perfectly the traditional style of vocal scoring. Each line moves logically according to the laws of proper voice leading, while contributing to the sonority of the chordal voicing. The spacing and general style resembles that of classical string quartet writing.

Further listening:
"Jesu, Joy of Man's Desiring" – Mormon Tabernacle Choir (CD: Jesu, Joy of Man's Desiring).

Music for large choral groups, as in this example, is usually divided into four lines, each one corresponding to a different vocal quality and range.

Male and female voices fall into four general categories. Those females with higher voices are classified as sopranos, those with lower voices are called altos. The males having higher voices are called tenors, those with lower voices are designated as basses.

Additionally, there are two subdivisions in these categories: female voices slightly lower than the altos are called contraltos, and males whose voices are lower than tenors but higher than basses are called 'baritones.

In writing for larger groups of voices the contralto can be assigned to the alto parts, but it is quite useful to give baritones their own line when scoring male voices, since the all-important root of a chord of any depth had best be assigned to a bass voice (or voices) to insure greater sonority and resonance.

In order to get a better concept of the timbre and use of voices, it might be helpful to associate each of the various types of voices with the instruments in the orchestra they most resemble.

Sopranos are like flutes, trumpets or 1st violins. *(Example 174)*

Altos are like oboes, flugelhorns or 2nd violins. *(Example 175)*

Tenors are like clarinets, french horns or violas. NOTE: It is important to be aware that the tenor part, though written in the treble clef, actually sounds an octave lower. A middle "C" written for tenor produces the sound of the "C" below middle "C," etc.*(Example 176)*

Baritones resemble bassoons, tenor trombones or celli. *(Example 177)*

Basses are like contrabassoons, tubas or double basses. *(Example 178)*

The ranges of the voices are not identical to their instrumental counterparts, but somewhat similar.

Example 173 – *Jesu, Joy of Man's Desiring* (Bach)

Je - su, joy of man's de - sir - ing,
Drawn by Thee, our soul's as - pir - ing,
Through the way where hope is guid - ing,
Where the flock, in Thee con - fid - ing,

Example 174 - Soprano Range (Parenthesized notes are possible extensions)

Example 175 - Alto Range

Example 176 - Tenor Range

Example 177 - Baritone Range: (Note: written in bass clef, sounds as written)

Example 178 - Bass Range

Female Voices

The females can be used very effectively by themselves, without the support of male voices.

Females' voices can be used in low unisons, which often arrive at the roundness and warmth of low flutes *(Example 179)* or high (but not uncomfortably high) triads. *(Example 180)*

Male Voices

Example 181 is an example of male voices showing the application of four-way harmony.

Phrasing, which should be marked clearly on vocal parts, depends on the pace of the music for length, and also on the lyric. If the choir is singing the melody and lyrics, a thought in the words and a phrase in the melody should be left unbroken wherever possible. Phrase marks are written over the notes *(Example 182)* and breath marks are written as commas. *(Example 183)*

When indicating phrases and breaths, hum the music to yourself to try to find the most musical and logical place for both, but also be ready to change either or both if the choir, when rehearsing the music, finds a better and more practical solution.

A final note on vocal writing is to call your attention to the importance of thinking horizontally instead of vertically. Voices are especially sensitive to good voice leading, which acts as a solidifier where pitch, phrasing and diction are concerned. Unexpected and illogical skips in vocal parts make intonation shaky, phrasing tentative, and words muffled.

Arranging big band charts with vocal solo

When a vocalist sings with a big band, the vocal part is of the upmost importance. If the band backing is too big, the vocalist has nowhere to go dynamically and the audience's focus will shift to the band. Many arrangers believe that writing these sort of arrangements are much more difficult than purely instrumental arrangements. The lyric is also important and can set the mood of the song and therefore influence the way in which the arrangement should be scored. The key selection becomes that of the singer's choice – not the arranger's.

Further listening:
"Diane Schuur and the Count Basie Orchestra" (CD 1987 – GRP records)
"Ella & Basie" (CD 1997 – Polygram)
Diana Krall – "From this Moment On" (CD 2006 – Verve)
Frank Sinatra – "The Capitol Years" (CD 1990 – Capitol)

Example 179 – female voices – low unison.

Example 180 – female voices – high triads.

Example 181 – male voices – four-part harmony.

Example 182 – Phrase markings.

Example 183 - Breath marks.

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Listening Examples CD Track List

1. Ex 16 In Case You Missed It
2. Ex 17 You Don't Know What…
3. Ex 21 Black Nile
4. Ex 22 Stella by Starlight
5. Ex 25a Autumn Leaves original
6. Ex 25b Autumn Leaves arranged
7. Ex 35 You Don't Know What…
8. Ex 37 Secret Love
9. Ex 38/39 Just Friends
10. Ex 42 Still Workin' It
11. Ex 45 Skylark
12. Ex 49a Beautiful Love 1
13. Ex 49b Beautiful Love 2
14. Ex 51a Yesterdays 1
15. Ex 51b Yesterdays 2
16. Ex 51c Yesterdays 3
17. Ex 54a All The Way
18. Ex 54b All the Way
19. Ex 56 Stella by Starlight 1
20. Ex 57 Stella by Starlight 2
21. Chord Substitution Exercise
22. Ex 63a All The Things You Are
23. Ex 63b All The Things You Are
24. Ex 75 Devil's Island
25. Ex 76 King Cobra
26. Ex 77 Day in Vienna
27. Ex 78 You Don't Know What…
28. Ex 79 King Cobra
29. Ex 81 Nutville
30. Ex 82 Miss Bessie's Cookin'
31. Ex 83 Three and One Ex's.
32. Ex 84a Lushlife original
33. Ex 84b Lushlife reharmonized
34. Ex 86 Just Friends
35. Ex 87 Upon a Rock
36. Ex 88 Upon a Rock
37. Ex 89 Hola
38. Ex 90 Still Workin' It
39. Ex 91 Hola
40. Ex 92 Clouds on Blue
41. Ex 93 Legacy
42. Ex 98 Three and One
43. Ex 104 Donna Lee
44. Ex 106 Dialmentia
45. Ex 107 Still Workin' It
46. Ex 108 Hola
47. Ex 109 Clouds on Blue
48. Ex 110 Trbs.
49. Ex 111 Trbs.
50. Ex 112 Trbs.
51. Ex 113 Trbs.
52. Ex 114 Still Workin' It
53. Ex 115 Still Workin' It
54. Ex 116 Brass
55. Ex 117 Brass
56. Ex 118 Brass
57. Ex 119 Clouds on Blue
58. Ex 122 Legacy
59. Ex 123 East Side Lonely
60. Ex 124 East Side Lonely
61. Ex 125 Dialmentia
62. Ex 126 Dialmentia
63. Ex 131 Brass
64. Ex 132 Dialmentia
65. Ex 133 Ariba
66. Ex 134 Still Workin' It
67. Ex 135 Still Workin' It
68. Ex 136 Gotta Be My Way
69. Ex 139,140, 141 Three and One
70. Ex 142 Three and One
71. Ex 143 Three and One
72. Ex 144 Us
73. Ex 145 Tip Toe
74. Ex 146,147,148 Hello & Goodbye
75. Ex 149 Hello & Goodbye
76. Ex 150 ABC Blues
77. Ex 152 Gush